100 per cent goodness for all Amstrad CPC users

AMSTRAD ACTION

ISSUE No.105
JUNE 1994
£2.95

PLUS ...A TAPE CRAMMED WITH STUPENDOUS CPC SOFTWARE

DELIVERANCE

FULL GAME IT'S HUGE! IT'S BRILLIANT! IT'S STORMLORD 2!

BASIC UTILITIES

KEEP YOUR DATA SAFE FROM PRYING EYES PLUS LOADS MORE

BOMBER

TOTAL DEVASTATION!

GET THE MESSAGE



Discover how your CPC can communicate with over 200 million CPCs, PCs, Macs, Amigas and other computers world-wide.





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AMSTRAD ACTION Line

Serious stuff

16 Techy Forum

Everything you wanted to know about the Amstrad CPC but weren't afraid to ask because you wrote in to AA's technical Q&A section with all your enquiries.

20 AA guide to: BASIC

Trivial Pursuits beware! This month we blow the lid on DATA and READ statements by getting you to write a quiz program (that's better than *Catchphrase*).

22 Hardware: Let's split



Join the dots for double the fun

Double the fun value in your favourite games. We show 464 owners how to make a simple device that'll allow them to stick two joysticks into one port.

24 AA guide to: Machine Code

Save time, save money, save energy. Sounds good doesn't it? And all you have to do is turn to this page and find out how to compress data in Machine Code. We are just so good to you.

Main feature



11 Get the message

Discover how your CPC can link up to millions of computers – including PCs, Macs, Amigas and other CPCs – the world over. It's not as expensive or as difficult as you might think.

26 Review: Music Maker

Oh no! Not another music package! Yes, but not just any old music package. This one understands musical notation, so true musos (like Simon) will love it.

26 Review: World Maps

We reviewed some UK maps for use with *MicroDesign* a couple of issues ago. Now the international ones are here.



27 ROMbox round-up

In answer to your queries we recommend the best ROMboxes, tell you where to get them and suggest a few reasons why getting one is a good idea. Service, as they say, with a smile.

28 Type-ins

There's a bit of a new look to the Workshop section of Type-Ins this month – it's in colour for one thing. And it's even better than ever before (though we would say that). But don't worry traditionalists, the other two pages are still darned good, and stuffed full of funky listings.

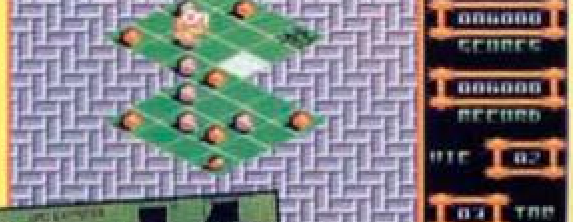
Leisure zone

31 Adventures: The Examiner

The first place to turn every month for every true CPC text adventure fan. This month Debby Howard casts her eye over a couple of adventure fanzines that you might like to get hold of.

34 Reviews: Fanzines

It's new! Sort of. We've had a Further Reading column occasionally before but this is the first in a regular look at CPC fanzines.





It's PD (above) but is it any good? That's what Public Image is here to tell you.

Meanwhile, Further Reading checks out the zine scene.

38 Reviews: Public Domain

More games, utilities and applications that you can pick up for the mere price of the postage and a disc come under the scrutiny of AA's very own resident PD playtester, Keith 'how much?' Woods.

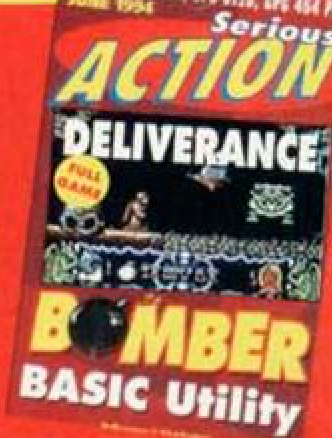
40 Preview: Megablasters

This could end up being the game with the longest gestation period in history – the author's been working on for about two years. But the release of this multi-player blaster now looks imminent. We take a look at how things are shaping up.

-up

Bits'n'pieces

Serious ACTION



So this is what the covertape looks like on the outside, but what's it got on the inside?

Deliverance

It's just like *Stormlord* – but bigger and better! Yep, that good!



Are you getting a sense of deja vu?

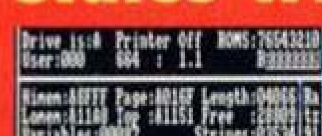
Bomber

Small but perfectly formed – you have to air-bomb a city and reduce it into pile of rubble before you crash into a skyscraper.



Fly-by bombing.

Program Status Window



Yep, it's a status window.

It's a window that tells you the status of a program, would you believe?

Disc Encoder

Keep your data safe by setting up your own personal password system.

Turn the page for full details on the covertape.



Serious ACTION



Simon takes you on a complete guided tour of this month's covertape...

Deliverance

Something's wrong in fairyland. The road outside Flob the Gnome's house is being resurfaced, and he can't get his car out of the garage. That's not all that's wrong, though. In fact, in the grand scheme of things, four workman and eight solid inches of collective bum cleavage is the least of Flob's worries. Slightly higher up on his list of things to pace around and fret about, just above the situation regarding the spiky wall clock (*every house has got one somewhere – why?*), was the problem with the fairies. Personally, he didn't have anything against fairies; nobody did. That was the problem.

It's been known for a long time that natural sources of energy, though better for the environment and everlasting, are difficult to harness. What isn't as widely known is that when a fairy cries, they light up, radiating light, heat and electricity. Beneath that cute exterior and the flutter of butterfly wings lies a heart that could power Leighton Buzzard single handedly for over seven years.

Laying low

Fairies are scarce – if you thought someone was going to come along and attach electrodes to some very sensitive body parts, you would be too. Nowadays, fairies are nowhere to be seen for two main reasons. First, the evil, power company-owning, villainous wizard Wazbnasm (boo hiss) has captured all the fairies he could and locked them in his power plants. Secondly, fairies are stupid, and don't know about things like cars, planes, drowning, death and disease. Smelly fairies that hide in ponds convinced they can still breathe aren't a problem to the rest of us, though, whereas the evil power company-owning villainous wizard Wazbnasm (he's behind you) is.


Hmm – I wish I could turn my head at that kind of angle.

In the prequel to *Deliverance*, *Stormlord*, the evil power-company owning villainous wizard Wazbnasm (I can't hear you) was defeated. However, the evil, power company-owning, villainous wizard Wazbnasm doesn't appreciate this. In fact, he's downright angry. Normally, this wouldn't worry Flob in the slightest, but when an evil, power company-owning, villainous wizard gets angry, he doesn't kick something, put on some loud music or even glass someone in the face. When an evil, power company-owning, villainous wizard gets angry, whole landscapes are changed, *Quantum Leap* is replaced by international snooker coverage and chasms rip through serene forest scenes that otherwise would have had cartoon deer sliding around an icy ponds. Things happen.

A cunning plan

Flob's a world-wise character, and as far as he's concerned, the odd evil, power company-owning, villainous wizard in a rage is nothing too serious to worry about, and definitely nothing new. In fact, Flob wasn't going to do anything about it – wizards have got very short tempers, but their rages don't last long. After a few more centuries, things would be pretty much back to normal, and everyone could carry on with their lives as if nothing had happened. Notice the phrase 'wasn't worried' was used there. You see, being an evil, power company-owning, villainous wizard, the evil, power company-owning, villainous wizard and all, Wazbnasm added insult to injury...

He said something about Flob's mother.

Flob got very angry, and vowed to kill Wazbnasm, walking the whole way.

Clever man, Wazbnasm.



Those green romper suits are all the rage in Paris.


We call this hat simply 'Bubble'.

And so Flob sets off through more strange and mysterious lands, intent on killing the evil, power company-owning, villainous wizard Wazbnasm. This journey was a lot longer than last time, though, and about a million times more difficult. Flob's forgotten his knife. Flob can't jump quite as easily. There are lakes of acid. There are hundreds and hundreds of ghoulish creatures out to get him, each with their own ghoulish fate lined up. Flob's in deep schtum.



On seeing the spiders, Flob very nearly decided to turn back.

Get serious

To break from the normal plot-type thing, this is a three-part game, the last two parts of which you'll need a score code gleaned from the first level to play properly. You can still see the levels, though, but after three incorrect codes, you'll be dropped into the game with only one life to your credit. Like I said, deep schtum.

To control Flob, you'd better use the joystick – up and down make him jump and duck, left and right make him walk right and left (though not necessarily in that order), and fire will make Flob spit fire at any number of ghoulish foul things that otherwise would hurt. You're journeying from left to right, and you might like to try collecting the extra weapons, bonus fings, and extra abilities as you go. The general rule is basically – if it moves, it'll hurt.

A few tips might come in handy to help you on your shaky way – bubbles are quite handy for standing on, and fairy tears are well worth collecting. You'll occasionally come across some quite dangerous looking objects on the floor that, when collected, will give you extra weapons to throw around and be nasty with.

One thing we'll make sure of is that the level codes aren't printed in Cheat Mode for quite a while to come – there's no way you're getting away with being lazy like that.

Nope, you're going to work for this one instead. Who knows – in a few months we might give it away but for now we're going to keep it all under our hats. AA



Now we find out exactly what Flob's made of.

We want to hear from you

As you've noticed this month, there isn't so much one huge serious package as a few smaller programs. This is for two reasons – first, we didn't exactly have huge amount of room left after the massive *Deliverance*, and second, we've pretty much covered every type of serious software there is to cover.

"Put Type-Ins on, then" we hear you cry. "No" comes the sturdy reply from Hairy. Instead, we're going to ask you for your submissions. We pay quite well for covertape software, we do – your program doesn't have to be the best thing since sliced bread, either. If you've written an application or utility that wouldn't work as a Type-In for reasons of length or file type, just send it along to:

Serious Covertape Submissions,
Amstrad Action,
30 Monmouth Street,
Bath, Avon BA1 2BW.

There are a few criteria your program has to meet, though – we don't accept just any old rubbish, you know:

- If it's a utility that everyone can use, it has to run on all machines.
- If it's a disc-only or 128k-only utility, it can't be too big (because we'll have to find something to put on the tape for owners of other machines). Think of 16k as a maximum size.
- It must be all your own work – plagiarism and piracy are the kind of things only complete lowlife indulge in.
- There can be no swearing, obscenity, nudity, crudity or mentions of cod.
- If you want your disc or tape returned, you must include an SAE. If you don't, your disc will be sold off for charity when we've finished with it, or your tape will be used to record some of Dave's indie-kid music.

Loading instructions



Getting started

To load up either side of the tape, simply rewind it, hold down CONTROL and press ENTER. Owners of 6128s or 664s will have to switch their machines to tape by typing |TAPE first. Remember that to get to Bomber and the serious software on side two you will have to wind through the last part of Deliverance first (it was so huge it wouldn't fit on one side). We were going to give you some tape counts so that you'd know where each program started but in tests eight out of ten owners whop expressed a preference said they came up with different results. Sorry.

Tape to disk offer

If you've got a disk drive and you want to get a disk version of this month's tape it's easy. Whip out your scissors and cut off that token at bottom of this page, chuck it in an envelope along with your name and address and a cheque or postal order for £2 made out to Ablex Audio Video, then send off the whole kit'n'kaboodle to:

AA105 Disk Offer,
Ablex Audio Video,
Harcourt, Halesfield 14,
Telford, Shropshire TF7 4QD.

Loading troubles?

We make the greatest efforts to ensure our cover-tapes work properly, but if you've tried all that and your tape's still not loading then pop it in the post (with a note telling us your name, address, type of CPC you use and a brief description of the problem) to:

AA105 Covertape returns,
Ablex Audio Video,
Harcourt, Halesfield 14,
Telford, Shropshire TF7 4QD
☎ 0952 680131

NB When returning faulty tapes could you please also include a stamped, self-addressed envelope. Thank you.

Please do not return faulty tapes to the AA office. There is absolutely no point. We cannot replace them here. Send them to Ablex, please and they can deal with any problems. Got that? Good.

Disk 105 Token

Bomber

Right, I'm going explain *Bomber*. I can't believe I'm doing this. It's really incredibly simple, you see. All you have to do is trash a city by bombing it from your plane as it continually circle above it.

If you manage to bomb it to the ground, you'll be able to land safely and progress to the next level which will have taller buildings (after a quick trip to the pub, according to this version – should this be what we let our kids play?). ER, now is there anything else I should be telling you? Oh yeah, you drop the bombs by hitting the space bar, but you probably would have worked that out for yourself – can you believe I get paid to do this.

Any questions?

Good. I could have explained that on the sleeve of the cassette, come to think of it. *(Hey, you're supposed to be selling this game to the readers – Dave.)* Oh yeah, simple ideas are often the best. *(Not a bad try – Dave)* Classic. Relive those early arcade days. Who needs complicated gameplay? Full motion video was crap anyway, etc *(he's getting the hang of this now – Dave).*



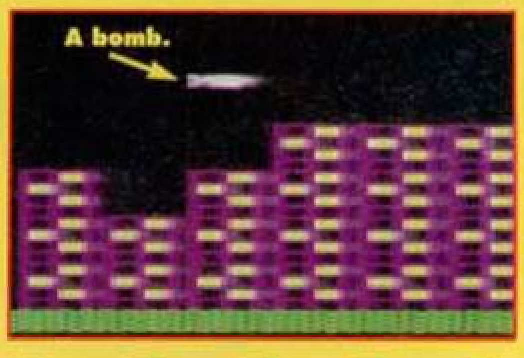
Big plane. No, I mean it – that really is a massive plane.



Nice architecture. No – really.



Go on, you know you want to.



A bomb.

Disc Encoder

Is your data safe from prying eyes? Are your most important letter files or new programs unprotected, ready for anyone to come along and see what they contain? You might be a government agent, you know – you might be keeping important information about missiles on your CPC. You might.

You could even be an FBI spy, and not even know it, that's how secretive they are – er, then again, knowing the FBI's reputation that's not hard. If you want to scramble your whole disc with a special code that only you know, simply load up this program and follow the on-screen instructions. It's as simple as that, really. That information about those missiles is safe from prying eyes at last, then.

Next month

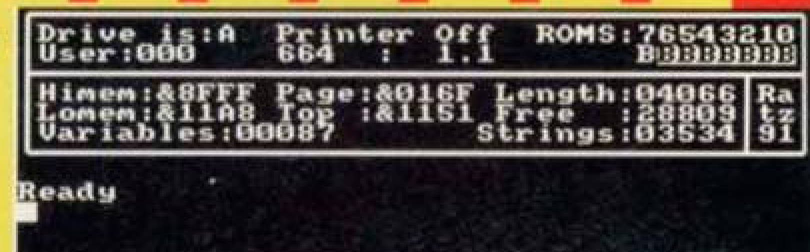
For the first time ever on the covertape pages, we can exclusively reveal what's coming up next month. Well, one of the things, anyway. Plus owner jump for joy, as you'll get a complete playable level of *Fluff*, for you to try before you buy.

Oh hell – I may as well let you all know that you've got the storming 21st Century title *Zynaps* to play as well. You lucky people, you.

Program Status Window

Are you trying to learn a bit more about your computer? Maybe you're trying to get machine code and BASIC programs running in harmony. Even if you just want to keep track of your ROMs, we've got a natty little program for you. What it basically is, is a window that, in a matter of milliseconds, will display vital information about your CPC's capabilities, and the BASIC program currently in memory. This is damned useful for calculating the amount of free memory left when a huge meaty program is in memory, what ROMs you currently have access to, where the BASIC program is sitting in memory, the limit placed on the BASIC program by any machine code settings, what the disc drive is doing, and loads of other stuff like that.

To bring the window up, just type `CALL &9000`, and the following information will be displayed in a neat little window on screen:



So here it is, in reality taking up no space at all. Question – what does it all mean? Well, it's the Program Status Window, and it makes BASIC programming so much easier.

1 Disc drive and user number of the drive

2 Printer availability status – on or off line

3 Computer type and OS version of ROM

4 Sideways ROMS on lower bank (ie, 0-7)

R – Background sideways ROM (ie, *Maxam, Protext*)

F – Foreground ROM (ie, *HackIt*)

E – Extension ROM

B – there is a BASIC (OS) ROM present (well, it would be pretty darned drastic if there wasn't)

E – Empty ROM socket

Depending on the machine you're using, empty ROM sockets either appear as empty of BASIC.

5 System variables

Himem – highest free point in memory

Lomem – lowest free point in memory

Page – start address of basic program

Top – End address of basic program

Variables – amount of memory taken by variables

Strings – amount of memory taken up by strings

Knowledge is power. Well you've got the knowledge bit now, so that's your first step towards megalomania.

Amscene

What's hot and not what's not on the CPC news front.

Make that link



AA's Ed, Dave, in a rare shot without his teeth in.

Just because we live in a world dominated by PCs and Macs, that doesn't make the CPC obsolete. You see, the CPC, despite its idiosyncratic disk drive and operating system, isn't totally cut off from all the new-fangled machines – there are a lot of ways they can intercommunicate, and that's what we tell you all about in this month's main feature on page 11. We've calculated that there are over 200 million PCs, Macs, Amigas and STs in the world, and your CPC has the potential to swap information with all of them. You might use a 486 PC at work, but that doesn't necessarily mean you can't bring your work home (if you really wanted to, that is).

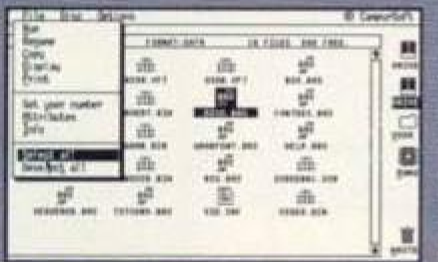
And, at last, we have a preview of the much mumbled-in-dark-corners about *Megablasters*. Like a lot of European software, it looks stunning – the question is, have all those years of effort that have been spent on the program been put into the gameplay as well as the presentation?

All this and more, as they say. I'm not sure who 'they' are, but apparently that's what they say. Dave

Campursoft hog lead news item shock!

The company that seems to be taking over the CPC scene these days has yet more software on the way. First, though, a measure of their success. We were confused here at the AA office, you see, when we received so many calls for readers wanting to buy ROMboxes but not knowing where to get them from. It turns out that there have been a lot of people buying *DES*, Campursoft's ROM-based desktop operating system, who are now rushing out to buy ROMboxes to house it. This is truly a good day for the CPC – if that many people are ready to support a new CPC product, it looks as if we be here for a long time yet.

Next up, Campursoft are currently offering a shareware version of *DES*, that'll happily run from disc. For a copy, just send a disc and a stamped, addresses jiffy bag to their usual address, and they'll happily provide you with a free copy. The version you'll receive will have a few of the desktop functions removed (this is a shareware version after all), but what you receive should be easily enough to persuade you to buy the full version. It is freely distributable.



DES goes shareware; MicroDesign goes global



Next up is the company's forthcoming video titling system. For those of you who're new to the idea, this is a package that lets you produce interesting title screens for your videos. You'll still need the appropriate leads (or a Videomaster, another of Campursoft's triumphs), but the professional edge it could lend to your home movies would fool even the most hardened film critic. The latest estimate for a release date is sometime next month, and we should have a preview of it next issue.

Finally (I thought it would never end), we've just received a review copy of their world maps, designed for use with *MicroDesign*. Check out the review on page 27.

Dedicated follower of fashion

Are you tired of dull T-shirt designs? Do you want to wear your own interesting designs for a very low price? A company called Quill Marketing may have the answer – iron-on print outs. If you have a computer, a printer, and an iron, you can create designs that Jean-Paul Whatsisface would kill for.



Design your own T-shirt

The pack includes sheets of paper. That's right. It's special paper, though – when you've printed your design onto it, you can iron the design onto any piece of fabric (it helps if it's cotton based, but polyester's horrible anyway), and have your very own colour washable T-shirt.

The packs will soon be available through most computer retail outlets, and will cover a wide range of printer types, from inkjet, thermal and laser printers, right through to dot matrix printers. So you too could look like the people in this photo, lead a normal and balanced life, and wear T-shirts denoting your interest in sports to demonstrate the fact.

Save the tree, man

Being in the business of wasting huge amounts of paper each month printing magazines, we thought you might like to know that we take the whole thing very seriously indeed. *Amstrad Action* is now printed on paper from managed forests, meaning that for every tree we hack down to review a PD collection or whatever, another tree is planted in its place, ready to grow old and get needlessly hacked down again for another magazine in the future.

Also, to stop huge amounts of damage to the ozone layer, rare and interesting plant life and huge mud mountains in Canada, the magazine you're holding at the minute is printed on ECF paper. The ECF bit stands for Elemental Chlorine Free, as we don't bleach the paper with chlorine. The down side to this is that you can no longer clean your swimming pool with the mag once you've finished reading it, but we hear that the massively environmentally damaging covertapes are pretty good for that.

Avatar vanish

Avatar seem to have completely vanished from the face of the earth. This, plus their treatment of some customers, means we're no longer allowing them to advertise in AA, but there are still people ordering bits and pieces from him, and many of them aren't receiving goods in return. So, basically, what we're saying is, don't send any money to Avatar.

Moves on Lethal

Just in case you were wondering (and judging the phone calls we get to the office, a lot of you are) Radical are now hard at work on the beat-'em-up *Lethal Moves*, but do not expect it to be ready until late summer at the earliest. *Fluff*, meanwhile, is also to be made available on disk.



If you want to be included in the Directory, or you know of any information that needs to be updated, write to: Amscene Directory, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

Amscene Directory

PD Libraries

Amsof
✉ Lissanly, Cloyne, Middleton, Ireland
Large range of European stuff.

Braysoft
✉ 2 St Margaret's Road, Hayling Island, Hants, PO11 9BP.
3-inch disks only.

Colrob PD
✉ 9 Aviemore Road, Hemlington, Middlesborough
New tape-only PD library

Demon
✉ 47 Hilton Avenue, Hall Green, Birmingham B28 OPE
3.5-inch discs available.

Disk PD
✉ Lower Dexbeer, Dexbeer, Holsworthy, Devon EX22 7LA.
☎ 0288 82348

GD PD
✉ 49 Woodville, Barnstaple, Devon EX31 2HL

Image PD
✉ Darren Dodds, 15 Elmwood Drive, Ponteland, Newcastle-Upon-Tyne NE20 9QQ
Also provides a digitising service.

PD Fun
✉ 41 Michaelgate, Kirkby Lonsdale, Via Carnforth, Lancs LA6 2BE
A policy of 'no serious software'.

Power PD
✉ 83 Longleat, Great Barr, Birmingham, West Midlands B43.

Signal Software
✉ 83 Longleat, Great Barr, Birmingham, West Midlands B43.

Sheepsoft
☎ 0446 736529
Based in Wales, of course. Baaaaa

Sleepwalker PD
✉ Disk software: Joe Moulding, 9 Meeting House Lane, Balsall Common, Nr Coventry CV7 7FX
Special offer to *AA* readers – if you send Joe a disk he'll send you a free selection of PD. Only one selection per person, please.

The Vault
✉ 43 Windfield Gardens, Clybaun Road, Galway, Ireland.
☎ 010 353 91 28204
A new but rapidly expanding library with lots of European software.

Ultimate PD
✉ 26 Woodside Road, Irby, Wirral, Merseyside L61 4UL
New PD library that specialises in 3-inch disk and tapes and has a wide selection of 'mathematics' programs available (whatever that means).

Fanzines

Amszine
✉ Gayton, Laneside Road, New Mills, Via Stockport, SK12 4LU
☎ 0663 744863

The Eliminator
✉ 14 Station Road, Riccall, York, North Yorkshire YO4 6QJ

CPC User
☎ 0329 234291
The UAUG's fanzine.

CPC Undercover
✉ 37 Trimingham Drive, Brandlesholme, Bury, Lancashire
A technically-minded fanzine that's also on the look out for writers.

Ultra Games
✉ 20 Lancaster Terrace, Chester-Le-Street, Co Durham, DH3 3NW
Cassette-based multi-format fanzine from the man who used to produce *Am-Com*.

User Groups

Amstrad Contact
☎ 0403 753348
Sussex-based group that also runs a technical helpline for CPC users.

UAUG (United Amstrad User Group)
☎ 0329 234291
An *AA*-recommended user group.

WACCI
☎ 0602 725108
If you're seriously into the techy side of the CPC then you really shouldn't be missing out on WACCI. They're fab.

Independent Software Companies

Avatar
☎ 0274 602180
Suppliers of Phil Craven products, and a few of the Bonzo titles.

Campursoft
☎ 041 554 4735
You name it, they do it, really – take a look at the interview in ish 96.

DMP Software
✉ 89 Wolverhampton Road, Codsall, Wolverhapton WV8 1PL
Over 30 home-programmed games and serious programs on both tape and disk.

Gary & Scott Kennedy
☎ 061 736 1204
Authors of *Trakers*, a truly great CPC game (don't argue).

New Age Software
☎ 01049-711-4201920
Responsible for *Zap'T'Balls*, the excellent *Soundtrakker*, and, hopefully, a few more titles pretty soon.

Radical Software
☎ 081 856 8402
Still releasing top-quality, new software for the CPC. If you've written a program you think is worth releasing this lot would love to hear from you.

SD Microsystems
☎ 0760 720381
Specialists in business software – take a look at the feature in *AA93*.

Sentinel Software
☎ 081 876 7032
Suppliers of selected STS titles and a few original products. They don't arf churn 'em out.

Siren Software
☎ 061 724 7572
It'd take a hell of a time to list everything they do – check out their ad (it's the yellow half-page one).

VerySoft
✉ 450 Roughman Road, Wingfield Estate, Rotherham, South Yorkshire.
The people who brought you *The Gripper* and *Comparitor*. They're also on the look out for new programmers.

Big Softies

So you can ring them up and hassle 'em about releasing some new stuff.

Alternative Software
☎ 0977 797777

CodeMasters ☎ 0926 814132

Gremlin/GBH ☎ 0742 753423

Ocean/Hit Squad
☎ 061 832 6633

Titus/Fox Hits ☎ 071 700 2119

Touchdown ☎ 0268 541126

Virgin ☎ 081 960 2255

US Gold/Kixx ☎ 021 356 3388

Zeppelin Software
☎ 091 385 7755

Hardware

Datel ☎ 0782 744707
The place to go for mice, printers, memory expansions, all that sort of stuff.

Microform Fax: 0772 703131
Drives, upgrades, disks, all sorts of techy stuff like that.

Romantic Robot
☎ 081 200 8870
Creators of the Multiface.

WAVE ☎ 0229 829109
Suppliers of loadsa good stuff – their ad is on the back cover.

Software suppliers

OJ Software ☎ 0257 421915
Fast friendly service, the ad says. And it's right. They've got an impressively wide variety of software on offer as well.

Software Cavern ☎ 0628 891101
Probably the largest selection of CPC software for sale in the known universe.

Software Express
☎ 0463 240168
A new company in Inverness.

Tronics North
☎ 010 6177 253 766
✉ PO Box 7419, Garbutt, Queensland Australia, 4814.
The largest supplier of software and CPC bits'n'pieces in the southern hemisphere.

Mail Order

Trading Post ☎ 0952 462135
They're offering loads of cut-price cartridges at the moment.

Trojan ☎ 0554 777993
The people to speak to for cartridge and lightgun stuff.

Wizard Games ☎ 0723 376586
Games, games and yet more games, basically on every imaginable format.

Upgrades and repairs

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Let's talk

The CPC can do a lot on its own. But imagine how much you could do if you could tap the power of millions of other computers. Richard Fairhurst gets on the blower...

You might not realise it, but when you look at your humble CPC (designed circa 1984) you are looking at an immensely powerful gateway to more computing power than you ever dreamed possible. Almost any computer, from a CPC up to the most powerful PC-compatible or Macintosh – even mainframes taking up whole rooms – is capable of hooking up to other computers and exchanging information.

This has never been more important than today. The buzzword in technology now is compatibility: if a computer can't exchange information with the omnipotent IBM-compatible PC, to be found in every office and increasing numbers of homes, it is doomed. You might be surprised to know that your CPC can.

The basics

The most common way to hook up computers is still by using that famed product of low technology, SneakerNet™. You too can install your own SneakerNet™ system if you have two or more CPCs. Here's how it works. If you want to move a program from one computer to another, save it on a disc, take the disc out of the drive, and put it in the other computer. Hey presto – communicating computers.



Problem number one: the CPC uses different-sized discs to nearly every other computer format.

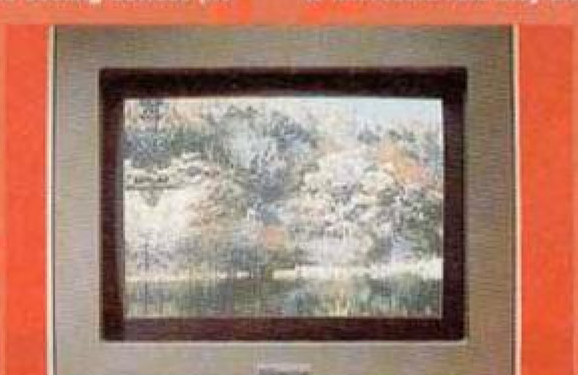
Try to put the same disk in a PC at school or at work, however, and you will come up against another problem: the disc doesn't fit. Unfortunately, in the real world, everyone uses 3.5-inch discs instead of the 3-inch discs that we all know, love and can't get hold of any more. No problem, thinks your above-averagely intelligent *AA* reader (rule one – always be nice to your readers), and goes out and buys himself, herself or itself a 3.5-inch drive from Siren, Avatar or the like. But put this disc in a PC, and MS-DOS will print a nasty message on the screen complaining that it doesn't understand (if you're running Windows, you'll get a beautifully-crafted box with a nasty message in it instead).

This comes about because, even if the disc sizes are the same, their formats – the way in

So what is a PC anyway?

IBM – an abbreviation for It's Big Money – dominated the computer industry from the 1960s, when 'computer' meant a huge collection of boxes requiring a budget of thousands of pounds a week just for the cooling devices (no joke). In the 70s, companies like Apple and Altair began developing small (or micro-) computers that almost anyone could afford. IBM took one look, thought "What's all this, then?" and promptly developed its own microcomputer – the IBM Personal Computer, or PC for short.

It was a dog. A CPC 464 with disc drive, developed only a couple of years later, was almost as powerful, cost a lot less, and played a far better game of *Roland on the Ropes*. Many conservative businesses, however, decided that anything with IBM on the box had to be a quality product, and more importantly, a safe investment. As a consequence, the IBM PC became the industry standard computer.



Since IBM didn't write the operating system (Microsoft did, and so became the most powerful company in the computer industry), anyone could make a PC just by talking nicely to Microsoft. And they did; today there are literally hundreds of companies making IBM-alikes, or PCs for short. Only Apple, maker of the Macintosh, managed a significant market share without PC compatibility – and even their newest machines, the Power Macintosh range, run PC programs. The PC's performance evolved through inertia if nothing else, and today's machines can still run programs from the mid-1970s version of CP/M on which the PC was based.

And that is why CPCs need to be able to talk to PCs. Here endeth the lesson.

Games without frontiers

Playing against a computer can be fun, but many of the best games involve competition between human players. Usually, this takes the form of two joysticks – or two sets of keys – sharing the same computer. However, if you have two computers of the same type and the right cable, you might be able to play multi-player games in which you fight players on other computers.

Walk into any computer room in universities the world over, and you'll see previously sane students reduced to nervous wrecks by *Doom*, *Bolo*, *Super Maze Wars*, or other sophisticated games. Adventurers are even more well catered for, with the profusion of MUDs (Multi-User Dungeons), in which you work to build up the abilities and wealth of your character so they can lord it over, look superior to, and generally beat up other characters controlled by people sitting somewhere behind another computer. A bit like a huge *Dungeons and Dragons* game, in fact.



***Power Tetris*: you would never have believed *Tetris* could be so violent.**

With a modem, you can play such games on your CPC (although this is one guaranteed way for the 'phone bill to soar). But if you fancy a more economical alternative, there are a few games which can be played by two CPCs connected to each other. Past attempts have included Firebird's futuristic *Cholo* and strategy offerings from the (now defunct) software house PSS. Today, those ever-resourceful European programs have provided us with the wonderful *Power Tetris* (in which four players can compete, two on each computer), and for something to look forward to, Odiesoft's originally-named *Megablasters* – a shoot-'em-up guaranteed to be the best way to lose all your friends yet.

Kit comms

The *AA* buyers' guide to communications ('comms' for the initiated) equipment.

● SERIAL (RS232) INTERFACE.
The Avatar/Cirkit and (out of production) Amstrad models are very similar: the Amstrad model comes with software on ROM, but all the best comms software is PD and on disc anyway. Siren's interface is cheaper (£29.99 rather than £39.99) but, owing to a couple of technical peculiarities, it won't work with any but its own (rather poor) built-in software, and can't be operated at the fast speed that today's modems require.

● COMMS SOFTWARE
Commstar, built-in to the Amstrad interface, is okay. However, your best bet is the thoroughly wonderful PD *BBS Terminal* (also known as ANSI.ARC), which does almost everything you could want – including work with fast modems. CP/M freaks might like to take a look at ZMP, another PD program, which has a more efficient way of transferring files than any other comms program. CP/M's not very good at running at high speeds, though.

● MODEMS
We could recommend one, but the best way to buy a modem is to go to your local newsagents, weigh up all the magazines, and buy the heaviest one. The mag you choose in this way is guaranteed to have lots of lovely modems for sale at around £60. Look for one which says 2400 baud (this means that it can shift data about pretty quickly), and Hayes-compatible (which means that you can tell it what to do with a bunch of unrecognisable abbreviations). You might be able to buy a fax-modem for this price, which acts as a fax machine too when hooked up to a PC, Mac or similar. Not that you'd ever consider using one, of course...

Legally, any modem you connect to the 'phone line must be approved by an official body called BABT. However, approved modems usually cost hundreds of pounds more, and no-one has ever been prosecuted for using an unapproved model. They're no risk to anyone, unless you see an approved modem going very cheaply indeed, don't worry about it.

● PHONE BILLS
When you use your modem, you're making a 'phone call. Thanks to the price reductions forced on BT by the regulatory body Oftel (you didn't think they did it out of the goodness of their heart, did you?), communicating is now easily affordable. Mr Cholmondeley-Warner would love you to sign up with the alternative phone operators, Mercury, though, and you might find it a very good idea, because long-distance 'phone calls on weekdays are still far cheaper with Mercury, and customer service is arguably a lot better.

Excluding the small increase in your 'phone bill, this means you can get set up in comms with brand-new equipment – for under £100. Second-hand, you could expect to pay maybe half that. Which isn't bad going when you consider how much it gives you.

which programs and other files are arranged on the disc – aren't. Fortunately, you can persuade your CPC to write to PC format discs. For this, you'll need either the commercial program 2-in-1 (from Moonstone Software) or Andreas Stroiczek's equally good shareware *DOScopy*.

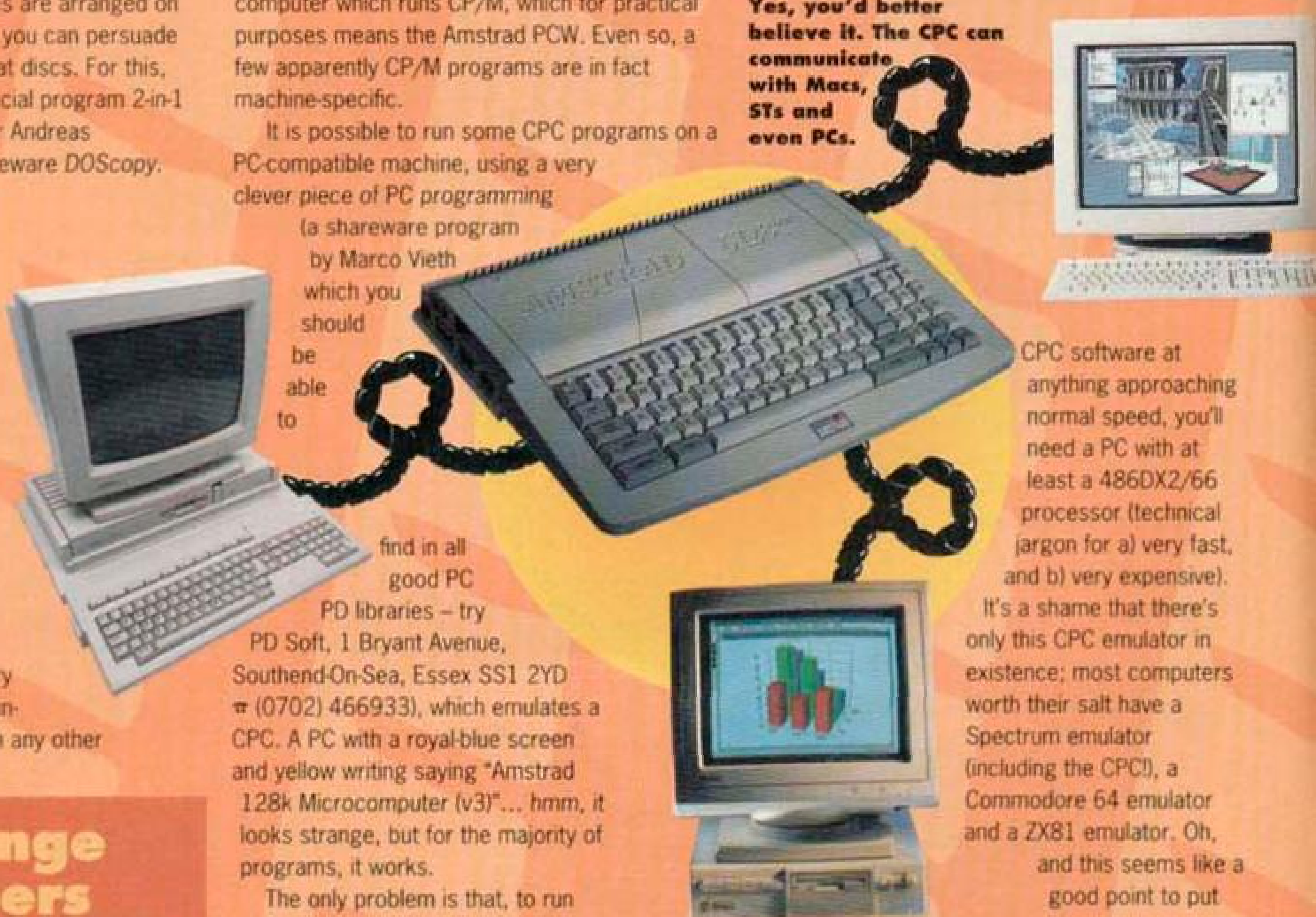
Garbled messages

So what information can you exchange between computers? Firstly, programs are out. The instructions which your CPC understands (a particular brand of Z80 machine code) will confuse a PC or Amiga.

The main exception is CP/M programs (the ones which have a filename ending with ".COM", which crash every five minutes and are horribly un-user-friendly); these will run on any other computer which runs CP/M, which for practical purposes means the Amstrad PCW. Even so, a few apparently CP/M programs are in fact machine-specific.

It is possible to run some CPC programs on a PC-compatible machine, using a very clever piece of PC programming (a shareware program by Marco Vieth which you should be able to find in all good PC PD libraries – try PD Soft, 1 Bryant Avenue, Southend-On-Sea, Essex SS1 2YD ☎ (0702) 466933), which emulates a CPC. A PC with a royal-blue screen and yellow writing saying "Amstrad 128k Microcomputer (v3)"... hmm, it looks strange, but for the majority of programs, it works.

The only problem is that, to run CPC software at anything approaching normal speed, you'll need a PC with at least a 486DX2/66 processor (technical jargon for a) very fast, and b) very expensive). It's a shame that there's only this CPC emulator in existence; most computers worth their salt have a Spectrum emulator (including the CPC!), a Commodore 64 emulator and a ZX81 emulator. Oh, and this seems like a good point to put



Yes, you'd better believe it. The CPC can communicate with Macs, STs and even PCs.

Exchange partners

Here are a few programs you can use to get different computers to read the PC-format discs your CPC has generated:

● AMIGA: try the shareware programs *CrossDos* or *Dos2Dos*.

● ARCHIMEDES: older Arcs need a program like *MultiFS*. Arcs with the newer RiscOS 3 can read PC format discs automatically.

● MACINTOSH: *Apple File Exchange* (comes free with all Macs), *Macintosh PC Exchange* or *DOS Mounter*.

● ST: there's no need. ST and PC discs are virtually identical.

● A CPC can read Amstrad PCW 3-inch discs using any one of a huge amount of CP/M PD programs – check out your favourite local library.

Doing it yourself

It's perfectly possible to run a bulletin board yourself with a CPC, but here are a few things you'll need to bear in mind.

First off, it's always best to run a bulletin board full-time. Even if you say that it'll only be operational between 10pm and 8am, so that you can use the 'phone for normal calls the rest of the time, someone is bound to 'phone you when you're in the bath. Picking up the 'phone to the screech of computer data (like playing a game tape on your stereo) is not very pleasant.

So, get BT to fit an extra 'phone line, and unless you don't want to use your present CPC for anything else, buy another one. You'll need a 3.5-inch disc drive to hold all the downloads and messages, a serial interface, a modem...

Finally, you'll need some BBS software. There are a few CP/M packages around – *ROS*, *PICS* and so on – and you'll need to be talked through setting them up by someone who's done it before, because it's not the easiest of tasks. If you're still interested, ask on a bulletin board.

Running a bulletin board is attractive – all the advantages of comms, but as people call you, no 'phone bills – but it's not realistic on a CPC. Your best bet is to find a cheap old PC (even an 8086-based model will do) with a hard drive, which'll work out just as cheaply and be less hassle.

Hacking

For most CPC users, hacking means breaking the protection on games to put in an infinite lives poke or similar – or its less legal brother, cracking, which is breaking the protection on games to make them easier to copy illegally. In comms circles, hacking is something different: breaking into other people's computers, often using a modem.

Common targets are large institutions: banks, military establishments, large companies, government departments... Hacking a bank has its attractions, such as being able to add a few zeros onto the end of your balance. And yes, you could do it with a CPC (if you don't mind chancing an extended stay in prison); one of the hackers involved in the once infamous Ritz Video hack, amongst others, did it all with a CPC, serial interface and modem. He now runs a thriving CPC software house...



More sinisterly, hacking is replacing following people and steaming open their mail as the new espionage. As most of the military computers are connected together, all it needs is one weak link somewhere in the system for national secrets to become vulnerable – and, considering most people's ignorance of computer security precautions, it's hardly surprising that this has happened more than once in the past (read the book *The Cuckoo's Egg* to find out more).

In the same way that many crackers do their dodgy deeds purely for the challenge of breaking protections, many hackers break into computers for similar, non-destructive reasons. However, be warned – the police wouldn't smile too kindly on someone who broke into houses just because they liked the challenge of picking locks. It might all sound like fun, but think how annoyed you'd be if someone broke into a computer and looked up your credit records.

A related activity to hacking is phreaking, which usually includes sending strange noises down the telephone to confuse BT into giving you free 'phone calls. After all, hacking requires long periods connected to computers trying out passwords, which is never cheap...

Further reading: *The Hacker's Handbook* (Hugo Cornwall and Steve Gold, out of print) is a mine of information on hackers and hacking, but hard to find. *The Cuckoo's Egg* (Clifford Stoll, Pan ISBN 0-330-31742-3) is a very entertaining (and true) story of a laid-back Californian academic tracking German spies under contract to the KGB.

an old chestnut to rest; you can't run PC, Amiga, Nintendo or live cricket games on your CPC. Anyone writing to Techy Forum to ask how to do this will be shot. Thank you.

Don't ASCII me

If you want to exchange other information between your CPC and other computers, it is a lot easier. Any decent word-processor will let you save a document as ASCII (American Standard Code for Information Interchange), which means "no frills"; no information on page layout or styles (such as bold or italics), just the letters which make up your text (in *Protext*, for example, you save from program mode). You can then load this into a word-processor on a PC, or virtually any other computer.

Protext users will be pleased to hear that PC and Amiga versions of their favourite word-processor are available. Very few people use them however, because they are hopelessly underpowered in comparison with the heavyweights like *Word for Windows*, but you will be able to load CPC files directly (without mucking around with ASCII), and the program will work in the same way you expect.

Cable communications

Actually, there is another way to transfer information between computers – via a cable. With this, and appropriate communications software at each end, any two computers with an RS232 (immortalised in a song by *Spitting Image*) or serial interface can communicate.

Amstrad, rather short-sightedly (but very much in character), didn't fit one to the CPC; however, you can use either their own add-on (now out of production), the Siren/KDS model, or the Avatar/Cirkit version (see Amscene on page nine for addresses). Connect the two machines together with what's known as a 'null modem cable', available from any computer shop for a few pounds, set one computer to send the file in question and the other to receive, and it should be plain sailing (as long as you have the correct software).

Tape user?

Communicating without a disc drive isn't so easy. With the speed that information travels over the 'phone line, cassettes just can't keep up, so you can say bye-bye to any thoughts of getting lots of nice PD programs from bulletin boards. You will also be limited to the software that comes with your serial interface, because most other stuff is disc-based (and PD, so probably only available on disc anyway). So, now might be a good time to buy yourself a disc drive after all.

Hanging on the telephone

There's one other reason for buying a serial interface – it lets your computer connect to a modem (and the jargon's only just begun...). Imagine that you wanted to connect to a computer in London, say, but you were in the *AA* offices in Bath. You don't have a cable long enough, and unfortunately Bloggitt's Computer Emporium has run out of 80-mile null modem cable. However, there's one company that does have a cable long enough – our chums at BT.

Put simply, connecting two modems to two 'phone sockets lets you treat the 'phone line in-between as one great big cable (except that BT aren't going to be very happy if you set at it with a soldering iron). Your modem, under the control of your computer, can make a 'phone call to another one, and the information you send from your computer will be relayed to the other as a series of beeps and high-pitched noises – which the other modem will convert back into computer data. You can send any computer data down a 'phone line – from programs and wordprocessor documents down to single-line text comments – and get anything back.

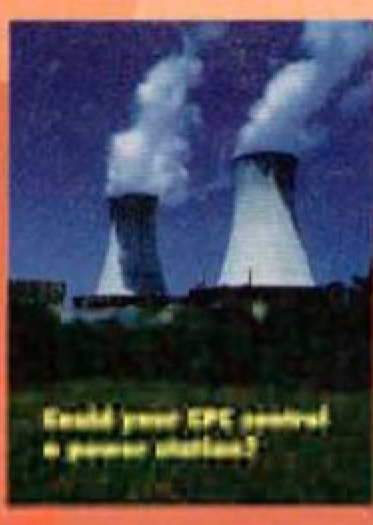
Bulletin

It's perfectly possible to just link up with a friend's computer somewhere else in the world using this method, but that's missing the fun of having a modem – because there are a huge

It even walks the dog...!

Here are a few other things your computer can communicate with:

- BURGLAR ALARMS (the 'Red Boxes' of yesteryear)
- MUSICAL INSTRUMENTS: the MIDI standard (Musical Instrument Digital Interface) is how computers and musical instruments are linked, and how almost every record including synthesisers is produced these days. A MIDI interface and 'sequencer' (which sends the right notes out to the synthesiser, in the right sequence) are all you need. Check out back issues for details, particularly those with embarrassing pictures of Adam Peters (RIP) on the cover.
- SATELLITES: maybe you can't control them, but the E-mail service Microlink also ran a meteorological service in which your CPC could download information from weather satellites.



Could your CPC control a power station?

- RADIO MODEMS: They're like normal modems, but transmit over the Citizens' Band radio rather than the 'phone. Theoretically a lot cheaper to run, but very few people use them these days.
- POWER STATIONS: Sinclair once ran an advertising campaign proclaiming that their prehistoric (but classic) ZX81 was used to control an (unnamed) nuclear power station. There've also been reports of CPCs, Spectrums and BBC Micros cropping up in numerous Ministry of Defence installations clad in anonymous metal casing.

Just to reassure you...



variety of computers you can hook up to. The humblest is the enthusiasts' "bulletin board" (or BBS, bulletin board system), which is usually a computer sitting in someone's bedroom with a 'phone line and a hard drive full of programs. You can dial up this computer and transfer the programs from it down the 'phone onto your machine – a process known as 'downloading'.

This is the secondary purpose of most bulletin boards, though, which exist mainly for discussions and electronic mail. As there are a lot of people all accessing the same computer, it makes sense for them to be able to communicate with each other, instead of just with the computer that the bulletin board is running on. Electronic mail (E-mail for short) means that users can send a private message to one another. Discussions (often described as 'message areas') are where someone posts a message that anyone can read, another replies to it, and before long, there's a full-blooded argument raging on someone's hard disc.



A wonderful system known as FidoNet hooks up loads of bulletin boards all over the world, so that discussions (or 'FidoNet echoes') can be carried out between users of different boards, and E-mail sent from the user of one board to another. FidoNet started as two computers linked in America and [illegible]

Calling Aspects

It's possible, for example, for a user of the Aspects bulletin board in Manchester to send a message to a CPC user over in Australia; and CPC users the world over can carry out a discussion in the FidoNet 'Amstrad Echo'. Aspects, by the way, is a truly fine board and should be your first port of call as a modem-owning CPC user. There are CPC (not just CP/M) programs aplenty to download, a friendly sysop (systems operator, the misguided soul who has given over his computer and a 'phone line), and as a FidoNet coordinating centre, you can be guaranteed to catch up on all the latest CPC gossip on the Amstrad Echo.

Even the worldwide FidoNet, though, is small fry compared to the current in-thing, the Internet. Back in the 1960s, Marshall McLuhan spoke of a 'global village' in which, thanks to new technology, international communication would be the norm. It's only now, with the Internet, that this is becoming a reality.

The Internet is a loose term used to describe a massive network of computers all over the world, and connects to many other networks – eg, Britain's Janet (the Joint Academic Network) and America's Tymnet – so that users of almost any network can communicate with each other.

More than just fun?

What's the practical advantage of all this? For a start, there's Usenet, which is like a huge bulletin board available on all Internet computers. Topics range from the predictable (various computers, although not the CPC) via the interesting (music, politics etc) and the sad (a section, 'Amiga advocacy', where Amiga owners persuade each other that they have the best computer ever [illegible]

Numbers

A few useful numbers:

- ASPECTS (bulletin board): modem number (061) 792 0260
- CIX (information service): modem number (081) 390 1255
- COMPUSERVE (information service): enquiries (0800) 289378
- DEMON INTERNET SYSTEMS: enquiries (081) 343 3881
- MERCURY: (0500) 500505
- SIREN SOFTWARE (serial interface): (061) 724 7572

E-mail takes on a new dimension with the Internet, because you can send a message from your computer to any user of any of the thousands of connected machines. For example, if you want to complain about the shoddy quality of this article, you could send a message to cf10014@phx.cam.ac.uk – cf10014, being my name on the computer in question, plus the computer's name, cam its location, ac indicating that it's an academic machine (co is used for commercial ones, for example), and uk being the country in which it's located.

You can send a message to Bill Clinton – try president@whitehouse.gov – although he isn't guaranteed to reply personally.

Comms problems?

Ask on a bulletin board: someone will usually have experienced the same thing before. Alternatively, write to your ever-friendly Technical Forum, Amstrad Action, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW. We'd also like to hear from anyone running a bulletin board that supports CPC users, or anyone interested in setting one up.

Best of all, as long as you can connect to the Internet, it's all free from then on. If you've just got access to a CPC and modem rather than a large business or university computer, though, you'll have to pay a subscription to a company which has a connection to the Internet itself. The biggest is Demon Internet Systems, who are [illegible]

Techy

You think you've got problems? Spare a thought for Richard Fairhurst. He gets hundreds every month. And they're not even his. They're yours. But he's paid to solve them, so don't feel too sorry for him.

Video star

I own an expanded 664, 6128, green monitor, MP-2 modulator and Amstrad VCR4700 video recorder. I would like to be able to use these to create titles on videotape. Can I feed an input from the CPC direct to the video recorder?

Could you tell me where I can get the software to create simple title lettering? I have the *AMX Pacemaker* program, but the picture from this always contains the icons, labels, etc, at the top.
Alec Williams, Chester

In the same way that you'd connect the MP-2 to a television, you can connect it to the aerial input on your video recorder, and record the titles in this way. The MP-2 isn't the highest quality unit you can buy, needless to say, and you might like to get in touch with Campursoft to find out about their *Videomaster* (☎ 041 554 4735).

They're also about to release a package specially designed for video titling, but if you want to stick with screens you've designed using *Pacemaker* (whatever happened to Gerry?), then it's perfectly possible to remove the icons from the top. You could try loading the saved screen into an art package, if you have one, and wiping the relevant area; even a simple package should prove capable of this. Alternatively, try the following program. It loads in a screen first of all (called TITLE.SCR), and then every time you press SPACE, wipes off a line from the top of the screen. Press any other key when you've finished, and the screen will be re-saved.

```
10·MODE·2:·LOAD·"TITLE.SCR",&C000
20·n=398
30·i$=INKEY$:·IF·i$=""·THEN·30
40·IF·i$<>"·"·THEN·SAVE·"TITLE.SCR",B,&C
000,&4000
50·MOVE·0,n:·DRAWR·640,0,0
60·n=n-2:·GOTO·30·
```

I hope that helps. **Richard**

Spot the dot

Help! Being very new to computing, and wanting to transfer *Stormlord* to disc, I decided to try my hand at the program you printed – never having tried the type-ins before. I had three or four tries at the program and at *Typechecker*.

Each time when I run or attempt to run one, my computer (a 6128) gives me a

Robots in disguise

Just recently my poor old monitor, a CTM640, blew up on me. I took it to the doctors and had it checked over. I got a phone call a day later to say that the transformer had blown. Yes I could get it repaired but it would upset my purse at £70 plus. What exactly is a transformer? Is it big or small? With the right parts, could I fix it myself?

My last little bit is this – whatever happened to MJC Supplies? I hear they went down the pan. It was so quick and easy to get my stuff from them, they were so very helpful. Have they gone forever? Will they rise again? Oh, how I wish I could hear the bloke's voice again. After all, he did sound a rather lovely dish (don't tell the husband).
Mandy Rowe, Milton Keynes



When I said I wanted a picture of a Transformer...

A transformer, as everybody knows, is a cunning device manufactured by Hasbro. One minute it's a car or a plane, the next it's transformed into a robot. It's not surprising that your monitor blew up if there was one of these inside trying to get out.

Alternatively, it's the bit of any electrical device that transforms the mains electricity (240V AC) into the appropriate voltage, direct current, for the device in question. It is, as such, a very vital component. However, over £70 is a complete rip-off; you could probably buy a second-hand CTM640 for £40. Should such a thing happen again, phone round a few repair specialists for a quote first. It's not the sort of thing you can fix yourself, though.

MJC went under owing to the recession, I'm afraid. Why the most efficient and friendliest of mail-order companies had to go bankrupt I have no idea, but that's just the way it goes. **Richard**

Top Tips

Desktop publishing

Here's the first installment in our exclusive Ten Top Tips collection. Cut out this column, then next month's and the month's after that and so on and, before long, you'll have a few pieces of paper saying 'Top Tips' on them. Other good ways to mutilate your copy of *AA* include using it as a wheel-chain in snowy weather, painting it red and using it as red carpet and leaving it outside 10 Downing Street with the word 'Covertape' crossed out and 'video nasty' written on it instead.

This month we kick off with a few essential tips for all budding fanzine editors.

1 The most important design element is consistency. Design a basic page plan, and save it to disc – you can then load it up as the first thing you do when creating a new page. You might find it helpful to have slightly different base plans for left-facing and right-facing pages.

2 Whenever they read your fanzine, readers have to read your fonts, so make sure that they're up to scratch. Try to avoid quirky effects in letters for the main body text, as they only make it dificult to read the article.

3 Three fonts is a sensible maximum – one headline font, one sub-heading font and one body text font. Any more than four is pushing it and your pages will probably end up looking a right dog's five-course dinner.

4 Clip art has its place (for example, award symbols for highly-rated games), but using it more than occasionally just looks tatty.

5 Don't let articles spread all the way across a page without interruption – it makes them difficult to read. Use at least two columns.

6 Try to avoid large areas of black. Not only do they have an unwelcome effect in that they tend to call attention to themselves, they're also notoriously difficult to print effectively unless your printer is in tip-top condition.

7 You'd be amazed how much impact your fanzine can make with a coloured paper cover. It's a simple but very effective idea.

8 The old chestnut – save your pages regularly. One guaranteed way to kill your enthusiasm for an article stone-dead is to have to rewrite the whole thing owing to a crash.

9 Other fanzines and magazines (not least *AA*, see page 34) will always be happy to mention your fanzine in these troubled times for the CPC. A few letters and sample copies can work wonders for your readership figures.

Forum

'Syntax error' and will not run either program. The listing gives me a space after the line number, which try as I might, I cannot get rid of. When I list them the space is there on every line. The magazine listing is as follows:

```
10·addr=&BE80
```

...and so on through the list. In spite of many careful attempts to get rid of the space, I get SYNTAX ERROR and the following:

```
10·.addr=&BE80
```

Reg Elms, Isle of Wight

Spot the difference between the dot on your screen and the one in the magazine. The one on your screen is a full stop, at the bottom of the line; the one in the magazine is hovering half-way up the line. That's because it's not actually a dot, it's a space. In Type-Ins we print a dot to show you where the spaces should go, because if you get the wrong number of spaces, *Typechecker* will complain – and counting dots is a lot easier than counting spaces. So every time you see a '•', type a space. From now on this is a system we will be using in Cheat Mode and Techy Forum listings as well. **Richard**

Painting by numbers

Have you got any idea where I can get a copy of the new, updated *GPaint* program?
A Sheldon, Nottingham

Try ringing around some of the Public Domain libraries listed in the Amscene Directory at the front of the magazine – Sheepsoft are usually good for that sort of thing. **Richard**

Up the creek

1 Is the GX4000's control paddle totally compatible with the 464?

2 I am writing a game in BASIC which is going pretty well. I was wondering if the background could be made more interesting using an art package or BASIC's DRAW command. If so, how?

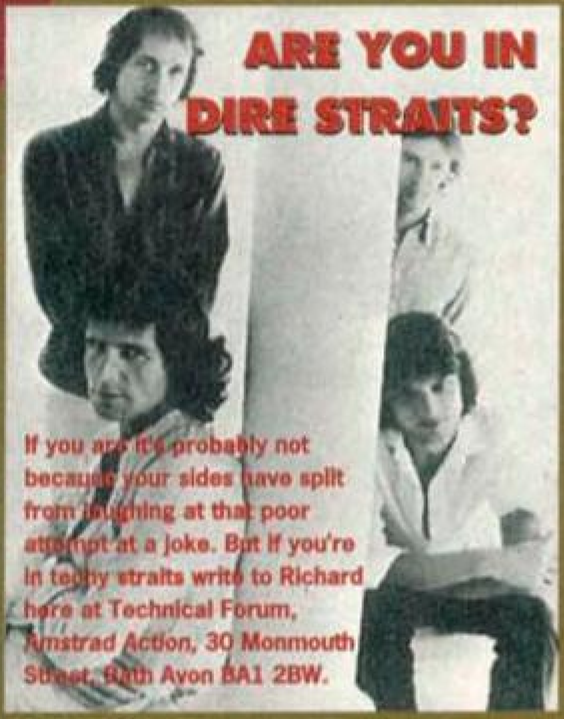
3 Are all the pen colours (in MODE 1) definable, and can they be changed half-way through a program?

4 How do I emulate FILL, GRAPHICS PEN and GRAPHICS PAPER on my 464? Also, how do you turn the cursor on and off?
Daniel Bryant, Exeter

1 Yes.

2 Using the DRAW command is all very well for a line-based background, but for the best and most imaginative results, you're best off working with an art package. Once you've saved a screen from your art package, you can load it onto the screen using `LOAD·"filename",&C000`. However, making sure that graphics don't obliterate the background is another matter entirely, and one which involves lots of messing around with sprites and such like.

3 Yes. To set a pen colour – or, as it's properly known, an ink (from 0 to 3 in MODE 1) – to a particular colour (0 to 26), type INK ink number, colour number. For example, to set pen colour 2 to red, you'd type INK 2,6. You can change inks half-way through a program, but anything currently on the screen in that ink will change colour too.



4 FILL is tricky, and is best avoided; if you only want to fill rectangles, a routine using the DRAW command in a loop is easy enough to write (if enough people want one, we'll give you a proper 464-compatible FILL command in Techy Forum one of these days). The other three problems can be solved using the *AA Toolkit* on last month's covertape. **Richard**

Colour me, don't colour me

I have recently acquired a Citizen Swift 24e colour printer. There does, however, seem to be a problem getting screen dumps in colour from *Advanced Art Studio*. Can you please help?
Ray Forster, Cleveland

MJC Supplies used to sell a colour printing utility called *ColourDump 3*, which will do what you want. Unfortunately, MJC have since gone down the plughole, but you can buy a copy for £15.95 from OJ Software (☎ 0257 421915). **Richard**

9-9

I just started buying AA with issue 100 and thought I would drop a line to say how good it is.

1 I've just bought this bubble-jet printer which is extremely user-hostile (on the Amstrad, at least). I can't use the driver software provided as it is on a PC 3.5-inch disc. I wrote a driver to do screen dumps, only to discover that the Amstrad only has a seven-bit port. How about a hardware project for an eight-bit printer port? If not, can you suggest where I might get one?

The printer uses bit-mapped graphics. How could I convert colour blocks to shades for black and white printing?

2 How do you do the equivalent of IDISC and ITAPE in machine code?

3 Do you know if there is a really good BASIC compiler available for

Tips

10 And finally, don't be afraid to take 'inspiration' from other fanzines. They've trodden the same route as you before, and probably made similar mistakes. What's more, with the amount of time they spend staring at a DTP package, they'll be more than willing to help. Probably the best laid-out fanzine produced on a CPC is Tim Blackbond's *Artificial Intelligence* (19 Lee Street, Liversedge, West Yorkshire WF15 6DZ).

Eat static

Most 3.5-inch discs these days come in plastic sleeves, as do Maxell 3-inch discs (whatever happened to the old cardboard ones?). Useful protection? Not a bit of it. The sleeves actually attract dust something something chronic, and dust means static – static, of course, means data corruption. Bad move.

Throw 'em away and put your discs in a proper disc box. You can get 3.5-inch disc boxes very cheaply these days from Staples, Office World and other such 'office superstores', and they're fine for the 3-inch variety too. Do it now, you know it makes sense (because we told you so, that's why).

Blowing bubbles

If you're one of the many who've seen the light and bought a bubble-jet printer, like the Canon BJ-10ex, you might initially have been disappointed by the quality of its so-called 'near laser quality' output. Don't worry, it's probably capable of a lot better results than you're getting from it.

The problem is to do with normal laser/copier paper – the ink 'bleeds' into it and spreads over the surrounding area, creating a blotchier and less clear image. Try proper inkjet/bubble-jet paper instead (which, like disc boxes, you can get cheaply from the increasingly popular office superstores). The difference is incredible.

the Amstrad CPC6128, and if there is, where will I be able to get it?
4 Why don't you put a tape-to-disc routine on all of the covertapes, to save us disc owners the wait?
5 Hex Heroes PD library provides the best service (within the week) I have ever had from a PD library.
6 Is CP/M Plus the same as CP/M 3.1?
7 Is the Glenco *Sprites Alive* package still available anywhere?
8 What's this *GAC* I keep reading about?
9 What happened to the WIMP system on the covertape a couple of months back?
Bob Salter, Perth

1 With many printers, you can get away without the eighth bit. You may be able to change your routine to print seven bits of data on each line, and simply adjust the line spacing accordingly. If you do this, you'll also need to make sure that you don't need to output the eighth bit when sending the number of bytes you're going to print; if that's 640, send 639 (&017F) and then the final byte separately.

This might not be possible on your bubble-jet, so you'll need to look for an eight-bit port. No mail order dealers are selling them at the moment so it's off to the Small Ads with you. Alternatively, we printed a hardware project a long time ago to do the job: if there's enough interest we'll consider repeating it.

To convert colour blocks to shades, you'll need to define a 'stipple pattern' for each colour; a stipple pattern is basically a small graphic block with a dark pattern for a dark colour, and a light pattern for a lighter colour. With a 360dpi bubble-jet, you've got plenty of detail to play about with, too. Incorporate these stipple blocks into your routine, and hey presto, one grey-scale driver.

2 The same way you execute any RSX from machine code. Set up the RSX name in RAM (with bit 7 of the last character set), point to it with HL, and `CALL &BCD4`. If carry is set, then you can `CALL &1B` to jump to the routine – otherwise, the command wasn't found.

3 Not really. SPM's *Power Basic* and Ocean's *Laser Compiler* were both reasonable efforts which you might be able to pick up via the ever-useful Small Ads. There was also a rather nice commercial German compiler which mistakenly found its way onto the British PD circuit (oops), but your chances of picking this up are even less. Keep going with the machine code!

4 We would if we could. Unfortunately, the pressures of producing AA for you make it difficult for us to act as master crackers and spend hours working on nifty tape-to-disc routines every month. When we can, we will put one on for you.

5 Three cheers for Hex Hero Richard Marra.

6 Yup.

7 Afraid not – you know what I'm going to say next, and it involves the words 'Ads' and 'Small'. Quantum's Aussie wizard, Richard Wilson, has been developing an infinitely better games creation system called *Zack*, which for the first time lets you produce commercial-quality games without machine code. We're not sure if it'll ever see the light of day (or if it does whether anyone will ever be able to get hold of a copy from the ever elusive Quantum) but if it does, you can be sure that AA will have full details.

8 *GAC* stands for *Graphic Adventure Creator*. It's a rather nice adventure programming system which we gave away on the covertape with *AA76* (back issues still available, folks). But no, before anyone asks, there are no *GAC* booklets left.

9 We had second thoughts, because the tape-owning population of Amstrad land might not be so keen on a disc-only WIMP system. We try to keep everyone happy with the contents of the tape. **Richard**

Just a number in your little black book

I have discovered that this statement, run in different styles, will achieve different results:

```
a$="abcde": PRINT @a$
10 a$="abcde": PRINT @a$
```

Using DATA statements produces further different values, which leads me to the opinion that the values returned are maybe pertinent to the amount of BASIC used, as in the location pointing to the next free byte for a BASIC program or something to that effect? The mystery deepens when you realise that without assigning a string in the first place, this would produce a SYNTAX ERROR message!

It doesn't make any difference how many characters you use in a$ (up to 256), which frustrates all my attempts to understand. Adding 256 to 368 would not agree with all those results! Very mystifying – at least to me it is. If you aren't aware of it, would you please experiment and let me know what your experts make of it anyway?
Brian Bond, Bromley

Never fear, Guru Fairhurst is here, the man who is incapable of writing a machine code routine without turning it into an RSX. He doesn't eat dinner, he executes `a$="DINNER": |EAT,@a$`. Writing a lot of RSXs means that you have to be aware of the intricacies of string storage on the CPC. Your confusion is understandable; it's not the most straightforward of subjects.

The @ indicator before a variable, indicates at what address in memory the variable is stored. A simple example: assign an integer variable, a%, to equal &0532 (hex). Now print `PEEK(@a%)`, which should be 50 (&32 hex), and `PEEK(@a%+1)`, which should be 5. Hey presto – that's your variable. The reason why you can't `PRINT @a$` before a string has been assigned to a$ is because a$ doesn't yet exist: it's hardly surprising that the computer generates an error when you ask it to tell you the address of a non-existent variable.

Where are the variables stored? Immediately after the BASIC program. This explains why you get a different result from entering a direct command, as in your first example, where there is no BASIC program in memory, to running the command when there is a program in memory (as in your second example).

However, if you assign two strings, you'll observe – as you've hinted – that their addresses don't seem to vary with the length of the string. To explain this, we have to look at how variables are stored. Integers are simple two-byte jobs, as explained above. Floating point variables are horrible great five-byte monsters that require a degree in Maths to understand. And strings? Three bytes. No matter how long the string is.

The first byte (ie, `PEEK(@a$)`) is the length of the string. The second and third bytes (`PEEK(@a$+1)` and `PEEK(@a$+2)`) store the address of the string itself, which is much higher in memory – near HIMEM, in fact – and so doesn't affect your calculations regarding low memory.

Try it yourself. This listing inputs a string, and then displays it on the screen using the rules outlined above:

```
10 INPUT a$
20 a=PEEK(@a$)
30 b=PEEK(@a$+1)+256*PEEK(@a$+2)
40 FOR n=b TO b+a-1
50 PRINT CHR$(PEEK(n));
60 NEXT
```

Hope that's all clear now! **Richard**

It's all Greek to me

I have a 6128. Is there any available disc software for word-processing in Greek, and at what price?
S Valavanis, Halesowen

The best choice for international word-processing is our old friend *Protext* coupled with the *Protype* print enhancer. *Protext* itself is £21.95 on disc (you can also buy a ROM version if you have a ROM-board), and *Protype*, perversely, is more expensive at £23.95. You can buy both of them from our old friends at OJ Software (☎ 0257 421915).

Incidentally, the reason that I keep on mentioning OJ is because they're advertising the most comprehensive range of serious CPC kit around at the moment. If anyone else has got large stocks of stuff that they think readers ought to know about, drop us a line. **Richard**

Basically Basic



Your starter for 10: how do you write a quiz program using DATA statements? What d'ya mean, 'pass'? Here's Simon with the answer.

So you've written a BASIC program, and you've come to a part where you have to store lots of information that will need to be accessed while the program is being run. How is it done? How can you store information quickly and easily and use it at any point? The most widely used method is the DATA statement. By the end of this month's installment, you'll have written a quiz program with a little library of questions that can be updated whenever necessary.

First, you need to take a look at how you're going to store and retrieve information easily. Let's start with a completely useless program that simply illustrates the point. The commands to pay special attention to are DATA and READ, by the way. If you're having trouble understanding FOR and NEXT, you'll need to read last month's installment (*order a... – Dave*). Yes, Dave, we know, back issues, page 19, etc. Anyway:

```
10·FOR·a=1·TO·3
20·READ·a$
30·PRINT·a$;"·"
40·NEXT·a
50·END
60·DATA Billy,was,confused
```

All this program is doing is printing the words, 'Billy was confused' on the screen, a task which could have been easily solved with:

```
10·PRINT "Billy·was·confused"
```

The importance of the longer program is that it demonstrates the use of the DATA system – the three words are stored as three separate pieces of information in line 60, separated by commas. All the READ command is doing is working its was though the information stored in DATA statements throughout the program, and placing them in the variable of your choice. In this case, the variable is a$, as the information is text.

If we wanted to store numbers, the program needs to be slightly different. In this example, only lines 20, 30, and 60 have changed:

```
10·FOR·a=1·TO·3
20·READ·a
30·PRINT·a
40·NEXT·a
50·END
60·DATA 5,78,3
```



"Get ready for the quiz of the century (or, sort of)."

This program, instead of displaying the numbers in a row, separated by spaces (as happened with the words in the previous program), each number is on a new line. This is only to stress that each piece of data is entirely separate.

Something else to remember is that every time the program is run, the READ statement starts looking at the first piece of data in the program again – it doesn't need to be reset.

A quick recap

In the true style of a well-planned article (purely accidental, I can assure you), this month's program will call upon quite a few things you've learnt in earlier months. The main commands you'll need to read up on are INPUT, PRINT, IF and THEN. If you haven't got previous issues, you can order them from the back issues pages for very reasonable prices (*hang on, you're putting me out of a job – Dave*).

Program of the month

In the meantime, let's get on with our program. The way this is going to work is with me giving you the full program straight away, then going through it line by line.

```
10·q=0:c=0
20·READ·q$
30·IF·q$="END"·THEN·PRINT·"You·s
cored";c;"out·of";q:END
40·q=q+1
50·PRINT·q$
60·INPUT·"",a$
70·READ·c$
80·a$=UPPER$(a$):c$=UPPER$(c$)
90·IF·a$=c$·THEN·PRINT·"Correct"
:c=c+1
100·IF·a$<>c$·THEN·PRINT·"Wrong·
-·the·answer·was·";c$
110·PRINT
120·GOTO·20
130·DATA·What·is·the·capital·of·
France?,Paris
140·DATA·What·processor·does·the
·CPC·have?,Z80
150·DATA·What·is·Simon's·middle·
name?,David
160·DATA·Who·makes·the·most·tea·
in·the·office?,Ollie
170·DATA·END
```

So there you have it – your fab quiz program, with four whole questions included. The program also has a little score system included that counts the number of questions it asks and how many of them the user got right. Let's go through it line by line, so you can see what's actually going on.

```
10·q=0:c=0
```

Before we do much else, we need to establish two numeric variables to keep

Two by two

This month we've covered several commands, READ being by far the most important. By way of demonstration, take a look at this:

```
READ·a$,b$
```

All the command does is read in two pieces of data instead of one, placing the first in A$ and the second in B$. The same idea works for the INPUT command:

```
INPUT·a$,b$
```

For a command like this, the user has to type something like `Simon,Forrester,` to place each word in a different variable. The comma has to be used, so it's best to warn the user before expecting them to cope with an input method like this.

some kind of score running. Q will represent the amount of questions the program finds in the DATA statements, and C will be increased every time a question is answered correctly.

```
20·READ·q$
```

We've already seen the uses of this command – it'll take the first piece of text found in the DATA statements at the end of the program, and place it in q$.

```
30·IF·q$="END"·THEN·PRINT·"You·scored"
;c;"out·of";q:END
```

This command is fairly unimportant until the program comes across the single word END where one of the questions should have been. When it does, it displays the user's final score, and returns to BASIC.

```
40·q=q+1
```

If the program gets this far, though, there must have been a question left. For this reason, the Q variable, counting the amount of questions asked, is increased.

```
50·PRINT·q$
```

If you can't work out what this one does, you really ought to start reading this series from the start (back issues, blah blah). In our program, it displays the question on the screen.

```
60·INPUT·"",a$
```

You should be fully aware of what the input command does – it allows the user to type text which, on pressing RETURN, will be deposited into the variable A$, where it can be used by the program. The grammar of this command is a little odd, and is explained in more detail in the box-out Input Explained (surprise, surprise). All you need to know for now is that it gives the user a chance to type their answer into the variable A$.

```
70·READ·c$
```

Similar to line 20, this command reads in the next piece of text which, if everything runs correctly, will be the correct answer to the question asked.

```
80·a$=UPPER$(a$):c$=UPPER$(c$)
```

This is an odd little line, that you probably haven't come across before on your travels around the CPC. The problem, you see, is that at the moment, if the correct answer is 'kippers' but the user gives it a capital letter ('Kippers'), the program will assume he's wrong. If you were to ask your computer to **PRINT·UPPER$("kippers")**, it'll display KIPPERS, turning it into uppercase before it did so. All the command **a$=UPPER$(a$)** does, then, is convert everything in A$ to upper case.

```
90·IF·a$=c$·THEN·PRINT·"Correct":c=c+1
```

If the two answers match, the program tells the user they were right, and increases their score.

```
100·IF·a$<>c$·THEN·PRINT·"Wrong·-
·the·answer·was·";c$
```

If the user was wrong, though, they're told so, and given the correct answer. The '<>' just means 'not equals to', by the way.

Input explained

If you've been reading the main text closely enough, you'll have noticed that the INPUT command crops up in the program we've looked at this month. Though relatively straightforward, a little explanation of the command may be in order. Try typing in the following program:

```
10·PRINT·"What·is·your·name?"
20·INPUT·n$
30·PRINT·"Hi·there,·";n$
```

As you can see, having a second question mark on the next line is a bit of a messy way of doing things. We could tidy the program up by changing line 10 to:

```
10·PRINT·"What·is·your·name";
```

But there is an easier way of doing things. Here's a shorter program:

```
10·INPUT·"What·is·your·name?·",n$
20·PRINT·"Hi·there,·";n$
```

As you can see, the INPUT command will happily print a string of text before it asks a question. When it does this, it also drops the question mark that normally precedes inputs from the user. This is why the command INPUT·"",a$ takes an input without a question mark. The fact that the input prompt is preceded by some text means there's no question mark, and the fact that the text printed happens to be nothing at all is neither here nor there. If you really wanted to, you could use:

```
INPUT·"Answer:",a$
```

Now you know how to tidy up your user inputs. Bear in mind, though, that you don't only have to ask for text, as a command like INPUT·a will take a numerical input.

```
110·PRINT
```

Belt up – it just leaves a gap on the screen.

```
120·GOTO·20
```

When the question, whether it's answered correctly or not, is finished with, the program jumps back to line 20, where it deals with the next question.

```
130·DATA·What·is·the·capital·of·
France?,Paris
140·DATA·What·processor·does·the·
CPC·have?,Z80
150·DATA·What·is·Simon's·middle·
name?,David
160·DATA·Who·makes·the·most·tea·in·th
e·office?,Ollie
170·DATA·END
```

And so our DATA statements contain the questions and their answers, separated by commas. The final data statement just contains 'END', to indicate to the program that there are no more questions.

There didn't have to be five different lines, though. The program would have been quite happy with:

```
130·DATA·What·is·the·capital·of·Fr
ance?,Paris,What·processor·does·th
e·CPC·have?,Z80,What·is·Simon's·mi
ddle·name?,David,Who·makes·the·mos
t·tea·in·the·office?,Ollie,END
```

The information being separated onto separate lines is purely to make things easier and neater us programmers.

Former glory

So you've got all these DATA statements hanging off the back of your program, and you've accessed them all. Now we have a problem – what happens when you want to use them again? Can we expect the user to stop the program and run it again every time you want to look at a piece of information further up the list? If we wanted the program to loop, we need some way of telling the READ command to start looking at the very first chunk of data again. Lo and behold, we've got a command called RESTORE. Let's change line 30 to read:

```
30·IF·q$="END"·THEN·PRINT·"You·sc
ored";c;"out·of";q:PRINT:RESTORE:
GOTO·10
```

We'd better go through the commands after THEN, then. Bear in mind that these four commands will only be executed if q$ contains 'END'. That means that these four commands are only executed when the quiz is completed.

```
PRINT·"You·scored";c;"out·of";q
```

We've seen this command before. It basically prints your score.

```
PRINT
```

Simple – it leaves a gap on the screen, so the next thing to be printed won't appear directly underneath the score.

```
RESTORE
```

Thar she blows – this command makes sure that the next READ command looks at the first piece of data again, as if the program had been freshly run.

```
GOTO·10
```

Yerss – I think we can pretty much work that one out. Of course, when it comes to commands like **RESTORE:GOTO·10**, we could have just used RUN, but if we'd have wanted to jump to a line other than the first one, we'd have been in real trouble.

Well, then...

So there we have it – our very own quiz program, and a mastery of the READ and DATA commands. Now we've learnt the basic principle that'll let us write incredibly complex software, using huge amounts of information quickly and easily.



Split ends

Nope, Simon's not finally getting a haircut. He's actually going to let the world know how easy it is to make a device that'll let you plug two joysticks into one socket.

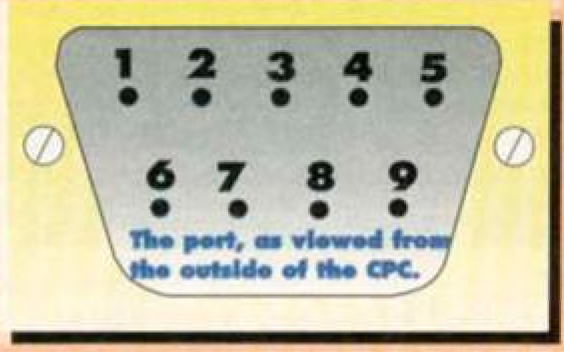
Have you got a copy of *Gauntlet*? Maybe you like the odd blast on *Ikari Warriors*? One of the problems with these lovely little games is that in two-player mode, because both people play simultaneously, one unfortunate person has to use the keyboard. A lot of people don't mind this, but joystick fans (like Dave) will definitely get annoyed.

There are three solutions to this problem:

- Buy a Plus – the newer range of CPCs have two joystick ports, making life incredibly easy. The older CPCs only have one port, though, so unless you want to spend huge amounts of cash for the sake of two joysticks, a Plus is not a viable answer.
- Buy the Amstrad joystick – When Amstrad originally released the CPC, they bundled it with loads of games and a joystick. This standard black plastic joystick had a mysterious second socket attached,into which you could stick a second joystick. This was okay, but it meant that the second player was attached to the first by a bit of wire, and the joystick was rubbish anyway. These were the kind of joysticks where the two people would toss a coin, the lucky one getting to use the keyboard.
- Read on – You'll learn how to build a joystick splitter of your very own, allowing you to use two joysticks of your choice, both of which will be attached to the CPC. Make sure you read every word of this feature before attempting anything yourself, though.

What do we do, then?

Before we get down to fiddling with bits of wire, we'll need to know how a joystick works. We won't need to know what microswitches are, just how the CPC looks at a joystick from its end of the bargain. Let's start with the joystick port, as you'd look at it from the outside:



The port, as viewed from the outside of the CPC.

As you can see, there are nine pins (you can count, can't you?). Five of these correspond to the five movements of the joystick, being up, down, left, right and fire. The way the CPC detects these five extra keys is simple – when the stick is moved in that direction, a connection is made between the particular pin and the pin marked 'common'. It's marked 'common' not because it blows its nose on its sleeve and drops its h's, but because it's the one connection that's common to every other.

Operating a second joystick with this system is, as my dear old granny used to say, simpler than... well it's unprintable, really. It's pretty easy, though – we just have to connect the five control pins to the second common pin, marked com 2.

The birds and the bees

To understand exactly what's going on with connectors, we'll need to get one little piece of terminology out of the way. Some connectors have pins sticking out, others have holes that the pins slide into to make the connection. I think you can use your imagination to work out which is termed as male and which is termed as female but if you're still having problems, pose the situation to someone slightly older and they should be able to enlighten you. Anyway, I think we can work out what we have to do...

No we can't

Fair enough – I'll tell you then. What we're actually doing is taking one female plug and wiring it to two male plugs. Both joysticks have to have the five controls, so they'll all be wired directly from both plugs. This means that as if you're looking at the plugs from the spiky ends (the backs of the sockets), pins 1, 2, 3, 4 and 7 have to be connected from the female socket to both male plugs. The wiring diagram for this looks a little odd, but it's very easy to understand – all the connections to male 1 are one lead, and the connections to male 2

Raw materials

To build this groovy little gadget, then, you'll need quite a few parts. They're all available from your local Tandy shop (well, that's where we got ours from), branded either Archer, Radio Shack or Smart. Whichever brand name they end up with, the part names are always the same. Anyway, you'll need:

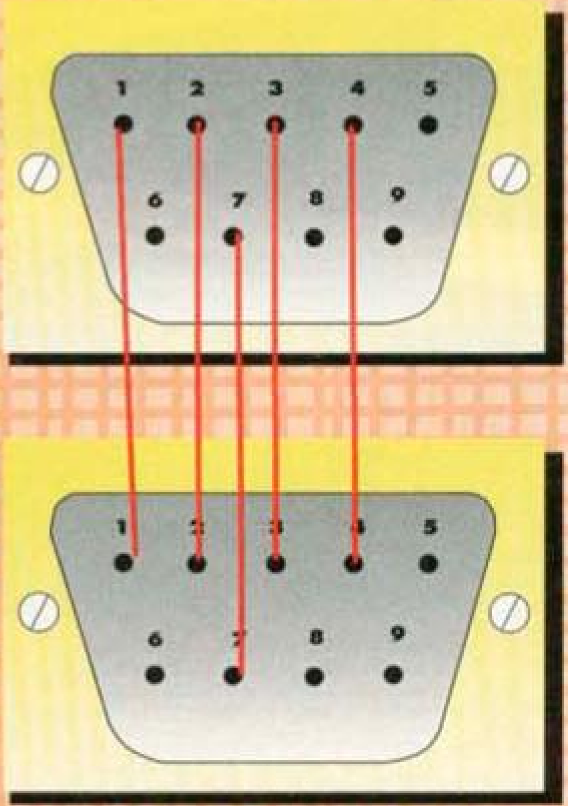
2	9-position male D-subminiature connectors (solder type)
1	9-position female D-subminiature connector (solder type)
3	Shielded D-sub connector hoods

The three connectors cost 99p each, and the three hoods will cost £1.99 each, making a total cost of £8.94.



Here they are – all the bits, nicely laid out. The whole lot for under a tenner.

You'll also need some wire (pretty obviously – what did you think we were going use, spaghetti?) but this can be obtained by slicing up any old joystick you can find – failing that, you can buy perfectly suitable ribbon cable for quite a reasonable price. Bear in mind that whatever cable you buy, it must have six wires inside it (a normal power cable has three, for instance), and these six wires must be very thin (I mean really blimmin' thin).



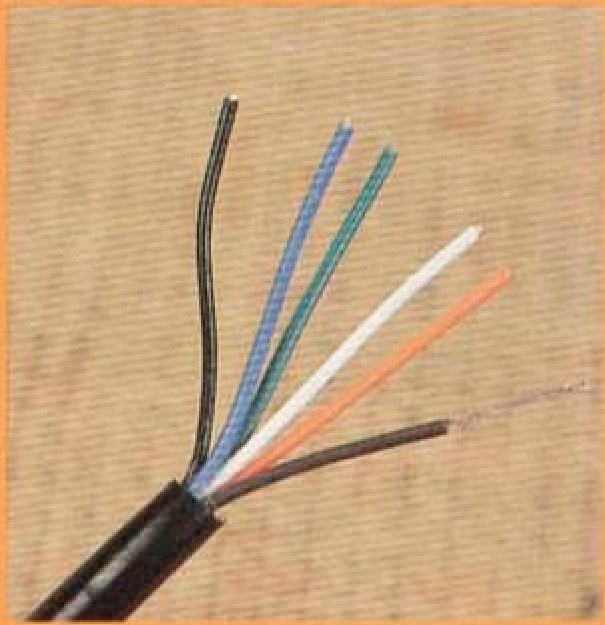
If you're thinking, "this all looks ridiculously simple," That's because it is.

are a second lead. The diagram above should make things a bit clearer.

The only important thing to consider is the connection of the common pins. Both male sockets have the common wire connected to pin 8, but these two leads aren't both connected to pin 8 of the female plug – the second lead is connected to pin 9. Oh hell – this is confusing, isn't it? Look at the diagram above for a clearer explanation, though we'll pretend the other wires we've connected don't exist for now, and concentrate on the individual pins. Don't think about the wires, – just concentrate on the numbers.

Soldering

Right – listen up. You'll need a soldering iron with an incredibly fine tip. You'll also need a roll of self-fluxing solder. The flux bit is just to stop everything going bubbly. This lot will cost you about £20, but a soldering iron will last you a lifetime if you treat it properly, and solder is very cheap.



The simple way to strip a wire – take a piece of wire and work around it scissor, just hard enough to break through the outer plastic bit.

Soldering is a method of heating metal to such a degree it turns to liquid, so you can pour it onto two pieces of wire, and it'll cool to make one solid conducting and connecting lump. Sounds a bit scary, huh?

Look – I'd love to say, "if you haven't soldered before, forget this project," but that's not fair. Instead, we're going to go through soldering two pieces of wire together. You can use this method to solder two pieces of wire to one of our socket connectors as well if you want.

1 Heat up your soldering iron, testing to see whether it's hot enough by occasionally touching a bit of solder to the tip and seeing whether it melts.

2 Melt some solder onto the tip of the iron. You're aiming for a fairly small blob, not big enough to fall off the tip of its own accord.

3 Hold the wires you want to solder firmly in place. In this case, you can stick the bit of wire into the thin metal tube. Make sure they're perfectly still, and well away from any other wires; you don't want to be soldered.

4 Touch the tip of the soldering iron to the wires, letting the solder run down onto the wire, fixing it to the second wire or metal tube or whatever.

5 Take the iron away from the new connection and, still holding the wire firmly, gently blow on the solder to cool it down. It should now be solid, and quite strong.

This takes quite a bit of practice, so getting a few odds and ends of wire and trying to solder them together is a good idea. Don't worry if you mess it up a few times – just work slowly, and you should get the hang of it after a while. If it helps, get someone else to hold the wire in place while you solder it.

Safety

I don't want to patronise anyone, but it's best to talk about safety here. A hot soldering iron is perfectly capable of burning a hole through your flesh, causing a good deal of pain in the process. Never touch the tip of the iron to test how hot it is – use a bit of solder. When you're charging the tip (putting solder onto it), use a long piece of solder, making sure your fingers are nowhere near the end that's about to melt. Get it? These things bloody hurt (I know – my hands are scarred from this sort of accident).

Step by step

Let's break this up into simple steps, then. We're looking at all three plugs from the back, keeping the female in the middle, with a male either side. All three plugs should have the narrow side flat to the table (the same way up as the previous diagrams).

1 Connect the top left-hand four pins of the female to the top right-hand four pins of each male. These are the directional and fire pins.

2 Look at the first male plug from the back. Locate the pin on the bottom row, one in from the left, and connect it to the female plug, at the pin on the bottom row, one in from the right.

3 – Connect the same pin on the second male (bottom row, one from left) to the pin on the far right of the bottom row of the female – and that's pretty much all the hard work done.

4 – Let the whole lot cool.



Out sockets, laid out male, female and then male. Don't ask.

Nearly done

There we have it – a functional joystick splitter. But, you have read this whole thing through once before you dug your soldering iron out, didn't you? If so, you'll have known that you were now going to use those cases you bought, and cover up that messy wiring, to pretend it doesn't exist.

That's it, really – there's only one way you can plug the thing into your CPC, but you might have trouble working out which is socket one and which is socket two. The easy way to find out is to plug a joystick into one of them and waggle it. If arrows appear, you've found socket one and can mark it with a 1, and if letters appear, you've found socket two.

Once you've sorted that out, you're all ready to load up your favourite two-player game, invite the friend over and, of course, have fun. AA



So we take our metal casing, and hide the disastrous messy wiring underneath it.

Why should you bother?

Good question. If you spend most of your time playing one-player games, then no (but you are missing out). If, however, you like nothing more than to romp around on *Bloodwych* in two-player mode, you'll need a splitter (or a Plus or an Amstrad joystick, but as I've explained elsewhere, neither is exactly the best solution). It could save your life, even (though I'm not sure how). And it only costs around a tenner, so you haven't exactly broken the bank, have you?

One thing – neither *Amstrad Action* or Future Publishing will take responsibility for scarred flesh, damaged computers, or charred houses. If you mess this up, on your own head be it.

Assembly Line

Size doesn't matter? Don't you believe a word of it. The smaller the better is Simon's philosophy, and he's going to prove it by talking about compression.





Last month, we took a look at the various things you can do with a disc drive and an assembler. Storing information is all very well, but there's only so much you can fit on a disc. Even though you can actually fit 205k on a disc (by using ten sectors per track and 41 tracks per disc), you might still need to cram a little more information on there. There are a few ways around the problem, though, and the one we're going to look at this month is compression.

The idea is simple – if we can crush the same amount of data into a smaller set of bytes, we've saved space before we've even saved it out. Disc owners can now sit up and listen because they're always paranoid about space, and tape owners can cartwheel around the living room because using smaller files cuts down on loading time.

One big crunch

Find yourself a tape user, and mention loading screens to them. I can guarantee they'll get depressed. The problem is that though it's nice to look at a pretty picture while a game's loading, that same picture takes aeons to load, wasting your time. For some reason, programmers still insist on using them, though. For a happy medium, we're going to take a look at a form of compression that could reduce those 16k files (17k if you're using a disc) down to around 9k. The size of the new file isn't always the same, but it usually comes out at around 9k. We're going to take a look at run-length compression.

Computer graphics are always stored uneconomically. Though storing a picture pixel by pixel allows fine detail, it also means that huge expanses of one colour are stored in massive strings of identical bytes (a solid block of nothing turns into 100-odd zeros). **Run-length compression** is a system whereby we take the long strings of identical bytes and represent them with fewer numbers, keeping the strings of varying bytes intact, as they can be more difficult to compress. This will be a lot easier to understand if we see it in action. Take this string of numbers:

```
0 0 0 4 5 2 2 2 2 2 2 2 9 2 5 6 6 6 6 6
```

As you can see, we've got some expanses of identical figures that we can compress. The file we're trying to create will have an odd format, as it'll be full of control bytes. For the minute, these will be represented by a number prefixed with a letter, so you can see exactly what's going on.



These control bytes are going to signify how many times the following byte is going to be repeated (when the letter is a 'C'), or how many bytes have to be written normally into memory (represented by an 'N'). It'll help to see how our numbers look after compression:

```
C3 0 N2 4 5 C7 2 N3 9 2 5 C5 6
```

The first control byte (C3) states that the next number (0) is going to be repeated three times. The next control byte (N2) states that the next two numbers (4 and 5) are to be written normally. The next control byte (C7) states that the next number (2) is to be repeated seven times, and so on.

As you can see, our string of 20 numbers has been reduced to a string of 13. The more perceptive amongst you will be wondering now how the control bytes are going to be represented, without taking up more than one byte. For this, we need to look at the binary forms of the control bytes:

	7	6	5	4	3	2	1	0
C3	1	0	0	0	0	0	1	1
N2	0	0	0	0	0	0	1	0
C7	1	0	0	0	0	1	1	1
N3	0	0	0	0	0	0	1	1
C5	1	0	0	0	0	1	0	1

If you examine the above figures closely, you'll notice that as well as having the number of repetitions or straight bytes represented in binary, the most significant bit of the byte (column seven) is either 1 (signifying compression) or 0 (signifying normal representation). The only restriction this places on the control byte is that it now only has a range of 0 to 127 – if there's a string of bytes longer than 127, there will be two

Glossary

● ASCII – This is the code system whereby letters, numbers, and all other symbols are represented by bytes. There are 256 in total (0 to 255), and a complete chart can be found in your manual.
● Bitwise – In this case, the working of bytes by fiddling with the individual bits they're made up of.
● Control byte – A byte in a file that doesn't appear in the decompressed version, as it's there to indicate things to the decompression program.
● Run-length – The form of compression relying on large strings of identical bytes.
● Source file – The block of data to be compressed.
● String – A series of bytes. A string usually refers to less than 256 bytes in a row, whether they're identical or not.
● Tokenisation – A compression system that relies on repeated phrases (strings of bytes), that can be replaced with a single token. An example would be 'the', which occurs several times in a text file, and so could be replaced with a token taking up the space of one letter, as opposed to three.

identical control bytes in a row (130 bytes, all being 0 would be represented with C127 0 C3 0).

NB: In a vain attempt to find out how much you've learnt in the past months, I'm going to throw all of the routines over to you – let's see what you can do. Can you come up a decent run-length compression program. In two months (to give everyone time), I'll print the winning entries, or my own routines if no-one else has got what it takes.

Words and music

One of the things to remember about run-length compression is that it relies on whole bytes being identical. When it comes to something like a text file, it's very rare that you'd get too many identical bytes knocking around, as at the most letters are only ever repeated twice in succession in the same word ('succession' has two repetitions, 'c' and 's'). Run-length would be heavily impractical, then, as you'd never save any space (replacing two identical bytes with a control byte and a normal byte is pointless, as it's still two bytes). It's for things like text compression that we can introduce **bitwise operations**.

Let's take a look at a string of bytes that might be found in a text file. The reason these bytes, though I've selected them at random, could appear in a text file is because their values are all lower than 128. There isn't any particular reason why the bytes in text are only 7-bit numbers, apart from the fact that the ASCII characters over 127 are odd symbols that are very rarely used. Let's take a look at eight 7-bit numbers laid out as bits in bytes. The bit values themselves aren't shown, as they're largely irrelevant – the numbers that are placed where the bits should be represent which byte in the string each bit belongs to. Anyhow:

Bits 7	6	5	4	3	2	1	0
1	2	2	2	2	2	2	2
1	3	3	3	3	3	3	3
1	4	4	4	4	4	4	4
1	5	5	5	5	5	5	5
1	6	6	6	6	6	6	6
1	7	7	7	7	7	7	7
1	8	8	8	8	8	8	8

It may look unintelligible at first, but if you take a closer look, you'll see that the bytes 1 to 8 are all represented by their seven bits, but the whole lot fits into 7 bytes as the first byte straddles the unused bit of the other seven. If this method is repeated with every string of eight bytes, you'll have shaved an eighth off the total length of the file. One eighth isn't all that much, though...

When I was writing *BooTracker* (that excellent, wonderful, etc), I was faced with storing strings of notes, where each note had to have an octave and an instrument value. For this, I used four bits of the byte to store the note, and the other four to store the octave. This is very similar to our text compression, as it uses one byte to store more than one value – the values were stored with a form of bitwise compression.

The unfortunate side to this is that you can't write a bitwise compressor unless you can predict exactly what type of file is going to be used. A bitwise text compressor is pointless, as shaving an eighth off the length of a file is hardly worth the time. The principle is important, though, because bitwise compression will be invaluable if you're writing a program that deals with large chunks of data, such as a music package.

But what about code?

That's a good question, really – what about compressing actual chunks of machine code? Well, there are several ways you can do this. By far the easiest is to find two numbers that are never used in machine code programs. Though difficult, there are always some. These two numbers are usually 175 and 181 (take a look – you'll see what I mean), and can be used as control bytes to signify either a phrase or an identical string of bytes. This method combines run-length coding and tokenisation in one swoop, which is probably the most effective form of compression when it comes to coding.

Remember, though, that instead of tokenising words in a text file, we're working with common commands in machine code such as 'call &bb5a', which comes out as &cd, &5a, and &bb, three numbers that repeat themselves and could be replaced with a control byte followed by a token reference number, making only two bytes instead of three. Though this is only a saving of one byte, the cumulative effect of performing this operation on several phrases in a large file could be massive.

Let's here it from you

Can you take the Hairy Challenge? The address to send all your Assembly Line submission to is: Assembled, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

A token gesture

Text files aren't completely useless, though – the fact that there's a bit going spare on the end of each byte can be useful for other reasons. **Token compression** is the system of identifying well-used strings of bytes, and replacing them with tokens. Let's take a few words, and see what we can do with them:

```
the·jelly·wobbled·on·the·plate
```

When we set about tokenising this, there are letters that are repeated, so the first 26 token values will correspond to double letters:

```
the·je[T12]y·wo[T2]led·on·the·plate
```

Remember, of course, that [T12] and [T2] are represented by single bytes, as are the letters, so we've shaved two bytes off already (as each byte holds the ASCII value of the a letter, or a token). Next, we'll take advantage of the fact that 'the' and 'on' are very common words, and assign them the tokens [T27] and [T28]:

```
[T27]·je[T12]y·wo[T2]led·[T28]·[T27]·plate
```

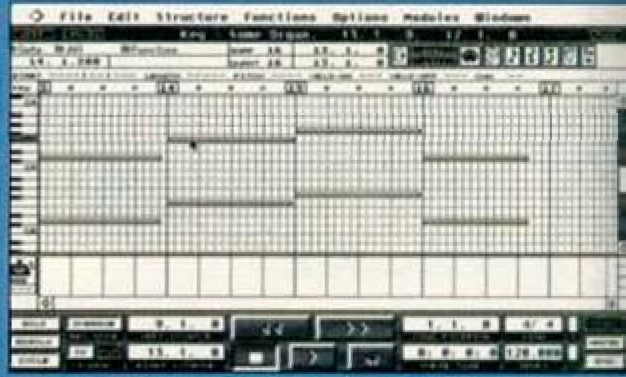
So from a string of 30 bytes representing the letters of 'the jelly wobbled on the plate', we've produced a string of 23 bytes that represent the same thing. If we take a 30k text file, then, we'd have reduced it to around 23k, or even less, considering most words are five letters long, and roughly half of them will be reduced to single byte tokens. A quick bit of mental calculation reveals that you'd come out with a text file about 18k long – you've knocked 40 per cent off the length of your file, producing a string of bytes 60 per cent of the size of the original. That's the kind of saving Texas Superstores love to offer you (in the form of very loud, hangover-unfriendly TV ads) during the week between Christmas and New Year.

Once again, I'm throwing this challenge over to you lot. If anyone would like to write it instead of me (please), there'll be some sort of juicy prize involved. Failing that, I'll just have to do it myself, you callous lot. AA

Next month

It was a long time before a hospital unit found me – *I was lucky to be alive*. After the horror of this month's Assembly Line came the terrorising fear that it could happen again today – or tomorrow. The cold dread of next month's journey into Z80 hung over humanity like the Sword of Damocles. Only time could tell...

Music Maker



There are many sophisticated music packages out there. Here's your chance.

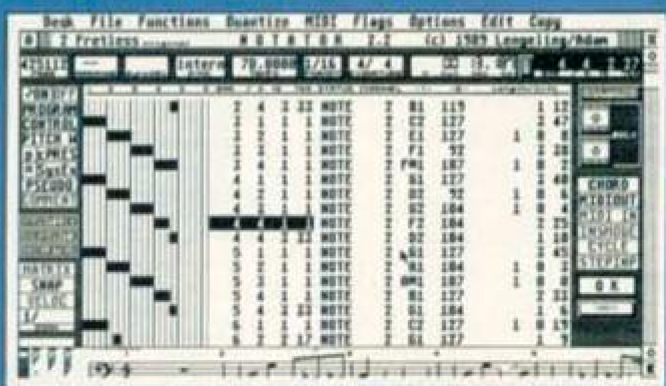
Simon casts his expert ear over a forthcoming music package that can actually read music... you know, demi-semi-quavers and things like that.

I've got to say something for this guy's bravery, you know. He sends a music package along to Amstrad Action knowing damned well who'll be reviewing it, and states in the documentation that it's better than 'other sound packages that use interrupts', because apparently 'they crash!'.

BooTracker didn't crash, Mark. That was what it was supposed to sound like (*we believe you, Simon – Dave*).

Anyway, Mark Payne from Reveal Software thinks he's got the answer to all our sound tracking problems – a music package that actually works with musical notation instead of lists of numbers. Whether this is a fabulously good idea or not is definitely debatable, but it's the method every Amiga, ST, Mac and PC music package has used since the beginnings of time,

Okay, so the sound quality differs, but these editors are still perfectly possible.



so bringing us up to date on that front could be quite a good idea. His other idea was sending this in as a preview version, as I don't get to make any evaluative statements just yet, after that last insult.

Teething troubles

The first part of the package, the musical notation section, is, unfortunately not yet complete, as it experienced some quite major teething troubles when running on our office CPC. These problems shouldn't be too difficult to iron out though, as they simply involve a bit of re-structuring on the part of the author to allow vital memory to be used in some sections.

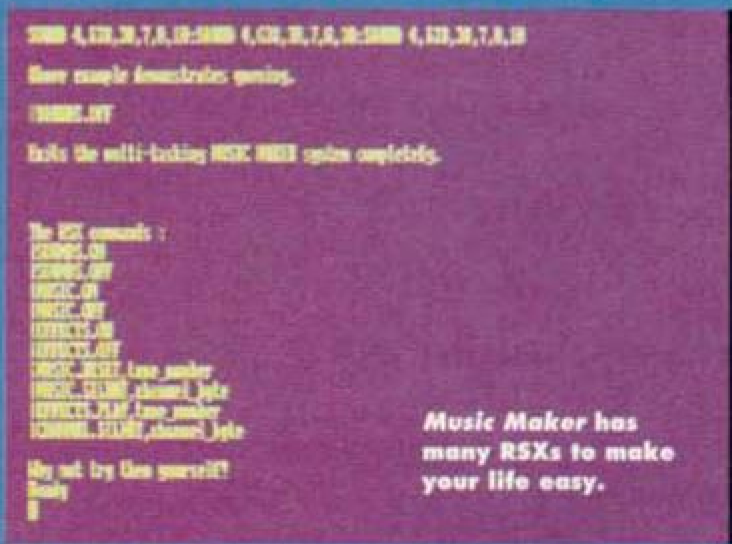
This is not the end of the preview, though – there's more to this music package than a notator section. To fully understand exactly what's going on, we'll have to take a look at exactly what a CPC music package is and how it works.

The incredibly simple explanation is this – it's a package which enables you to write music for inclusion in your own programs; only being able to play a tune you've written from within the original music package isn't going to do the title screen of your latest game all that much good, is it? Instead of this really hideous situation of having written a symphony and it being utterly trapped inside the package, most music programs come complete with an external driver that can be loaded from BASIC or machine code and set running, so that it looks as if the work was all on your part, and you weren't helped out by a sophisticated music package at all, no.

The BASIC driver is probably the most advanced we've seen so far, by the way, using some rather self-explanatory RSX commands, instead of long and forgettable machine code hex addresses, to do the job.

No naff addressing

Running from BASIC, this package looks as if it's really going to leave a mark – not only are all of your sound envelopes left untouched, but the naff hardware addressing thing isn't used as it normally is – you don't have to go into the realms of stupidity when writing programs to cope with the tunes in anything other than terror.

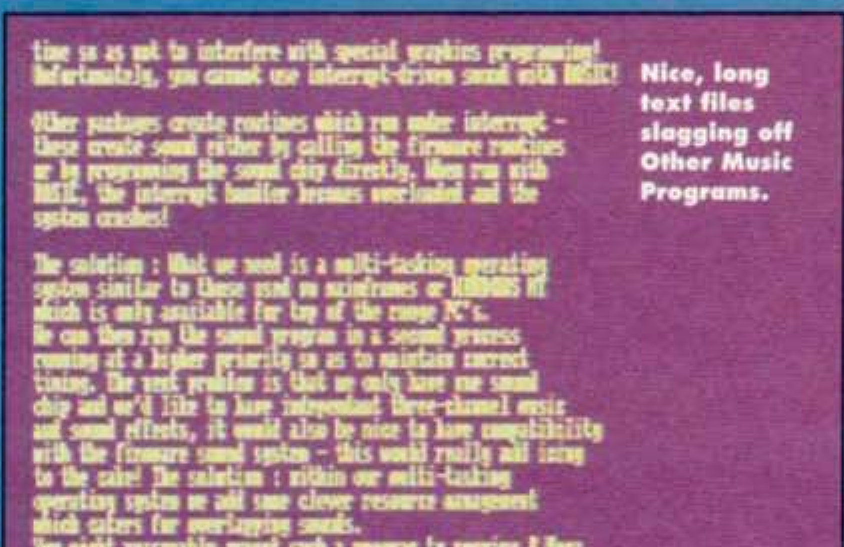


Music Maker has many RSXs to make your life easy.

The RSXs that have been planned are nothing if not comprehensive – they're the standard commands for initialising tunes and turning them off again, but it doesn't end there. First, the package has capabilities for sound effects, meaning those long, tiresome ENV and ENT commands won't be necessary – it can all be loaded and used with the rest of Music Maker's facilities.

Secondly, the RSXs give you an incredible control over exactly what's happening and when – you can disable all sound effects if you feel it's really necessary, as you can with the music, to make sure things don't crash.

You don't need to take it that far, though – the sound system is billed as a multi-tasking affair, so it's running happily in the background without any interference from anything you happen to get up to in the meantime. Having this rather special ability does come with a few drawbacks, though – a lot of work (on the part of the programmer, you lazy mob) has to be done to actually get tunes, sound effects, and normal sounds working



Nice, long text files slagging off Other Music Programs.

MicroDesign World Maps

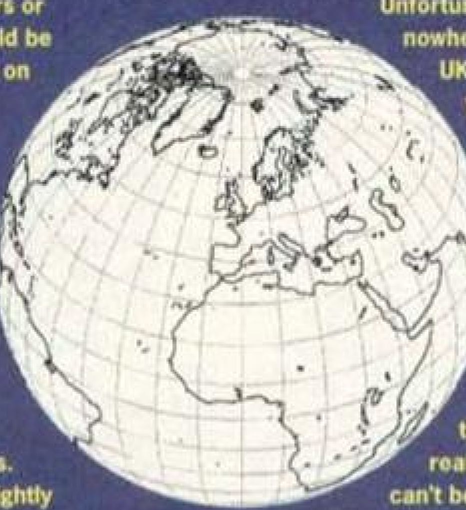
A couple of months back we reviewed a map package for use with *MicroDesign* which allowed the user to print out various maps of the UK for the to include in their DTPed pages, posters, reports, newsletters or whatever else they felt would be better off with a map stuck on it. Now along comes an accompanying package that gives you the whole world to play around with.

The variety of different views is quite astonishing, as you'll find not only several maps of each individual continent, but a view of the whole planet from different angles.

The planetary view is slightly odd because of the limitations of the original *MicroDesign* package – first, the size of picture you can import with the package is quite limited, meaning that if you wanted to fit the entire planet onto your screen it'd have to be impossibly small, probably too small to work with. Instead, the planet has been sliced horizontally like an orange, letting you load up a fraction of the planet at a time.

Unfortunately, the world maps are nowhere near as detailed as the UK maps. Okay, we don't want to see the main dirt track from Woolawonga to Sydney, but a few more country boundaries or major deserts and mountain ranges would have made this package a lot more valuable.

But whatever it's failings, this is a package that'll really let you see the world... (I can't believe I just said that).



Sign up and see the world.

Details

PRODUCT: World Map Collection
PRICE: £11.99
AVAILABLE FROM: Campursoft
☎ 041 554 4735

happily together without combining into a cacophony of cack. *Music Maker*'s own sounds are incredibly well co-ordinated. Two of the three channels of the tune cut out for the length of time it takes to play any particular sound effect automatically, and the whole lot sits in the background for normal CPC beeps and squeaks.

It's looking good

In all, this looks as if it could definitely be the kind of package you'd want to use – if you don't have a very good understanding of musical notation, staves, semi-quavers and crotchets you might like to think carefully before sending off your cheque, but there's no better way to learn than being thrown in at the deep end. For those of us who've already got a working knowledge of musical notation, this should be a welcome breath of fresh air after using so many computer programmer-orientated music packages that care more about the way the driver works than the tune being played.

Of course, you'll have a while to wait before having to make the decision whether or not to part with your cash – this is only a preview, but we expect the full version along for its review (*and nit-picking session, knowing you – Dave*) quite soon. Until that time, you'll just have to make do with the rather excellent *BooTracker*, won't you? (*He never stops trying, does he? – Dave.*)

Details

PRODUCT: Music Maker
PRICE: To be announced
AVAILABLE FROM: Reveal Computer Software at PO Box 1818, Redditch, Worcs, B97 4AZ or ring ☎ 0527 597707

Stop Press! How you can get ParaDOS

Campursoft have just taken over the sales of *ParaDOS*, the high capacity disc operating system, previously sold (or attempted to be sold) by the hideously unreliable Quantum. The package will now be available for an amazing £14.99, so order now while stocks last.

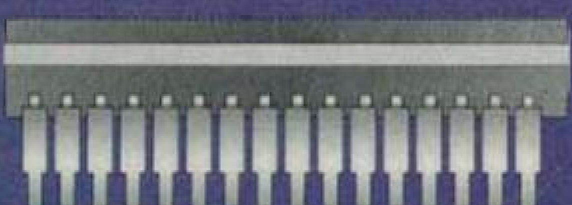
Contact Campursoft on ☎ 041 554 4735.

ROM Information

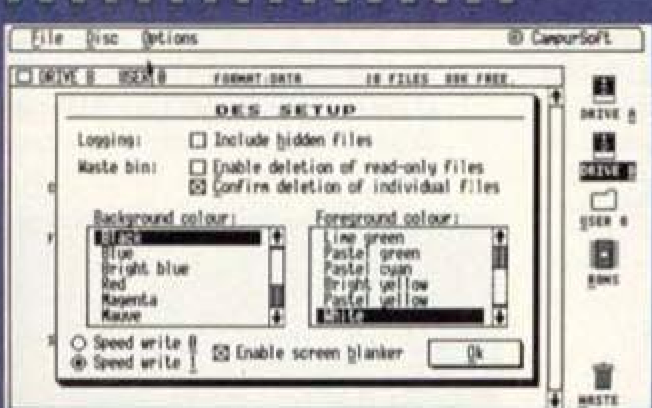
It's come to our attention recently (owing to a constantly ringing reader call telephone in the office) that you lot seem to be running around desperately trying to find ROM boxes so that you can run Campursoft's rather excellent ROM-based desktop system DES, and you're not having much luck by the sound of it.

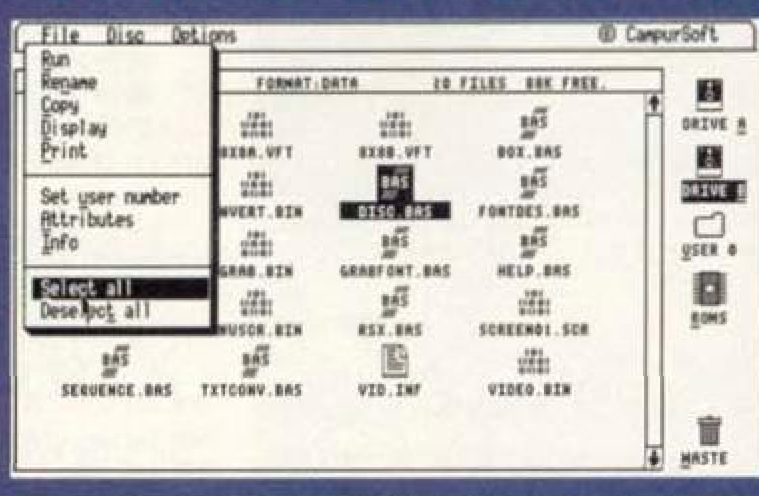
Y'see, one of the places we always used to recommend you get ROMboxes from, Avatar, seem to have gone well and truly down the plughole, and there's no point sending any money off to them any more.

This still leaves the problem of finding a ROMboard, though, doesn't it? An infinitely more reliable company, namely Siren Software, are currently selling single-slot boards for £14.99, though these won't be suitable for DES, which sits happily on two ROMs. Instead, Siren are looking into collaborating with Campursoft to produce a special DES box along the same lines as the *HackIt*, Siren's other ROM-based success (apart from *ROMDOS*).



Can you see this? Are you just looking down at two unused chips instead?





You bought DES. You need a ROMbox now, though, don't you?

For more information on these lovely little boxes, you can contact Siren on 061 724 7572, as they should have some firmer details by the time you're reading this.

Failing that, if anyone thinks they could write us a hardware project for producing your own working ROMboard, please send it along to the mag at the usual address and maybe we'll even publish it in these very pages, and thus you'll earn yourself long-lasting glory in the eyes of the thousands of would-be *DES* owners. It could be the start of something big.

Type-ins

Simon discovers that embarrassing one person per month is really good fun. So for a whole three pages, it's over to Chris Morgan and his amazing programming powers.

This Chris Morgan really does seem to be an excellent programmer (and I'm saying that partly because he's used a lot of techniques I've covered in *AA* over the time I've been here, and I'm flattered). Full credit to Chris for some wonderfully programmed games, the first being a listing called simply Platform Game.

Platform Game

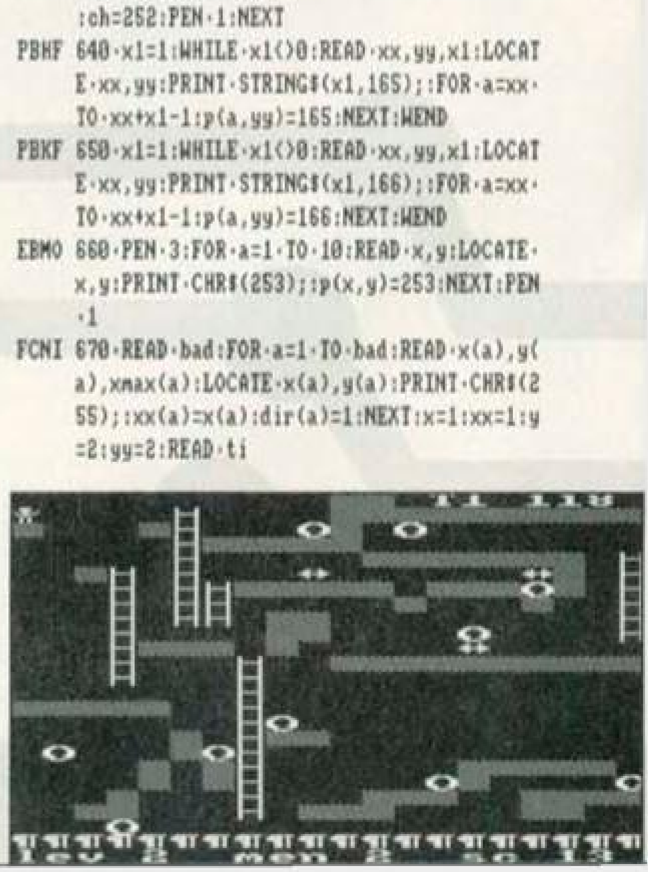
This one's a platform game (just in case you hadn't worked that out).

```
GAEG 10·REM·Platform·Game
GAOP 20·REM·by·Chris·Morgan
DACB 30·REM·(c)1994
BAIG 40·REM
IAIL 50·SYMBOL·253,60,102,195,195,195,231,98,
     60
IACA 60·SYMBOL·252,66,66,66,126,66,66,66,66
CAPL 70·GOSUB·530 .
GAFF 80·DEFINT·a-z:DIM·p(21,25)
```

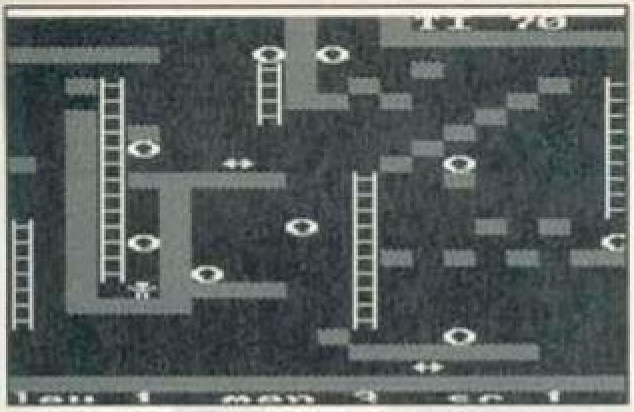


Built-in instructions make my job so much easier. That's a tip for getting into print...

```
GAPC 90·ENV·1,5,1,1,5,1,1,5,1,1,5,1,1
DAAJ 100·ENV·2,100,-1,1
FAFH 110·ENV·3,10,0.5,5,10,-0.5,5
LAHB 120·level=1:lev=1:men=3:INK·2,18:INK·3,2
     5
FACN 130·MODE·0:c=248:GOTO·590
HAEB 140·ti=ti-(level-lev)*4
FBGK 150·LOCATE·1,25:PRINT"lev";level;"·men";
     men;"·sc";sc;:LOCATE·14,1:PRINT"TI";ti
HAAD 160·LOCATE·1,2:PRINT·CHR$(248);
MAMF 170·tt=TIME/300:DEF·FNtim=tt+ti-INT(TIME
     /300)
FAMD 180·REM·main·loop
FBBC 190·IF·FNtim<>lt·THEN·LOCATE·16,1:PRINT·
     FNtim;:lt=FNtim:IF·FNtim=0·THEN·490
MCMG 200·IF·t/4<>INT(t/4)THEN·220·ELSE·FOR·a=
     1·TO·bad:LOCATE·xx(a),y(a):PRINT"·";:p(x
     x(a),y(a))=32:xx(a)=xx(a)+dir(a):IF·xx(a
     )=xmax(a)OR·xx(a)=x(a)THEN·dir(a)=-dir(a
     )
PAKN 210·LOCATE·xx(a),y(a):PRINT·CHR$(255);:p
     (xx(a),y(a))=255:NEXT
HABO 220·t=t+1:IF·p(x,y)=255·THEN·490
GAMH 230·IF·p(x,y+1)=207·THEN·270
DBAK 240·IF·p(x,y+1)=165·AND·t/3=INT(t/3)AND·
     x>1·AND·p(x-1,y)=32·THEN·x=x-1:GOTO·260
DBEK 250·IF·p(x,y+1)=166·AND·t/3=INT(t/3)AND·
     x<20·AND·p(x+1,y)=32·THEN·x=x+1·ELSE·270
CAPO 260·GOSUB·430
JBHB 270·IF·jump=0·THEN·290·ELSE·IF(p(x,y-1)<
     >32·AND·p(x,y-1)<>253)OR·y=1·THEN·fall=1
     :jump=0:GOTO·290
DBFP 280·y=y-1:GOSUB·430:jump=jump+1:IF·jump=
     5·THEN·fall=1:jump=0·ELSE·300
MAOA 290·IF·fall>0·AND·INT(fall/3)=fall/3·THE
     N·370
OBHM 300·IF·INKEY(8)=0·AND(p(x-1,y)=32·OR·p(x
     -1,y)=255·OR·p(x-1,y)=253)AND·x>1·AND·p(
     x,y)<>252·THEN·x=x-1:c=251:GOSUB·430:GOT
     O·320
OBHO 310·IF·INKEY(1)=0·AND(p(x+1,y)=32·OR·p(x
     +1,y)=255·OR·p(x+1,y)=253)AND·x<20·AND·p
     (x,y)<>252·THEN·x=x+1:c=250:GOSUB·430:GO
     TO·320
HAFM 315·IF·c>248·THEN·c=248:GOSUB·430
FAKH 320·IF·fall>0·THEN·370
FAIJ 330·IF·jump>0·THEN·190
FAPN 340·IF·INKEY(0)=0·THEN·390
GBEH 350·IF·INKEY(2)=0·AND·jump=0·AND(p(x,y)=
     252·OR·p(x,y+1)=252)THEN·y=y+1:GOSUB·430
     :GOTO·190
BBHD 360·IF·fall=0·AND(p(x,y+1)=207·OR·p(x,y)
     =252·OR·p(x,y+1)=252)THEN·190
KBDP 370·IF·p(x,y+1)<>32·AND·p(x,y+1)<>253·AN
     D·p(x,y+1)<>255·THEN·380·ELSE·y=y+1:GOSU
     B·430:fall=fall+1:GOTO·190
LAMF 380·IF·fall>16·THEN·490·ELSE·fall=0:GOTO
     ·190
ABJC 390·IF·p(x,y-1)<>252·AND·p(x,y)<>252·THE
     N·410·ELSE·y=y-1:GOSUB·430
CAHK 400·GOTO·190
FAMA 410·jump=1:GOTO·190
KAEK 420·REM·print·new·char·position
FBHK 430·LOCATE·xx,yy:PRINT·CHR$(p(xx,yy));:L
     OCATE·x,y:PRINT·CHR$(c);:xx=x:yy=y
HAGD 440·IF·p(x,y)=32·THEN·RETURN
DEDA 450·IF·p(x,y)=253·THEN·p(x,y)=32:coin=co
     in+1:sc=sc+1:LOCATE·17,25:PRINT·sc;:SOUN
     D·1,30,34,15,1:IF·coin/10<>INT(coin/10)T
     HEN·RETURN·ELSE·level=level+1:lev=lev+1:
     FOR·a=1·TO·3:SOUND·1,100-a*10,80,15,3:NE
     XT:IF·lev=5·THEN·lev=1:RESTORE:GOTO·130·
     ELSE·130
GAMC 460·IF·p(x,y)=255·THEN·490
CALJ 470·RETURN
CACP 480·REM·die
ADGI 490·SOUND·1,2000,70,15,2:FOR·a=1·TO·8000
     :NEXT:IF·men=1·THEN·510·ELSE·men=men-1:I
     F·level=1·THEN·RESTORE·ELSE·IF·level=2·T
     HEN·RESTORE·770·ELSE·IF·level=3·THEN·RES
     TORE·840·ELSE·RESTORE·930
JALJ 500·coin=0:fall=0:jump=0:GOTO·130
PBJJ 510·MODE·1:PRINT"You·scored"sc"points":P
     RINT:PRINT"Press·any·key·to·play·again":
     CALL·&BB18:CLEAR:GOTO·80
GANH 520·REM·title·screen
KAGI 530·MODE·1:PEN·1:PRINT"Platform·Game"
GEIE 540·PRINT:PRINT"·You·must·collect·all·10
     ·the·coins·to···complete·a·level.·Each·l
     evel·contains·a·few·baddies,·which·you·m
     ust·avoid.·You··may·climb·up·and·down·la
     dders,·and·jump,but·you·may·only·fall·so
     ·far...
KCGG 550·PRINT"·In·some·levels·you·will·also·
     meet······converor·belts.·By·standing·on
     ·these·youwill·move·in·a·certain·directi
     on.
ODHN 560·PRINT"·There·are·four·different·leve
     ls·for·youto·complete,·and·the·remaining
     ·time·is··shown·at·the·top·right·corner,
     ·You·have·three·lives·to·collect·as·many
     ·coins·as·you·can"
ADGK 570·PRINT:PRINT:PRINT"Controls·-·the·cur
     sor·keys·:":PRINT"Up·-·jump/climb·ladder
     ":PRINT"down·-·climb·down·ladder":PRINT"
     left/right·-·move·left/right"
ABHL 580·LOCATE·1,25:PRINT"Press·a·key·to·Pla
     y":CALL·&BB18:RETURN
HAGC 590·REM·set·up·screens
NAGA 600·FOR·x=1·TO·20:FOR·y=1·TO·25:p(x,y)=3
     2:NEXT:NEXT
ACNL 610·PEN·2:x1=1:WHILE·x1<>0:READ·xx,yy,x1
     :LOCATE·xx,yy:PRINT·STRING$(x1,207);:FOR
     ·a=xx·TO·xx+x1-1:p(a,yy)=207:NEXT:WEND
OBNB 620·ch=207:FOR·a=1·TO·2:x=1:y=2:y1=1:WHI
     LE·y1<>0:READ·xx,yy,y1:LOCATE·xx,yy:FOR·
     b=yy·TO·yy+y1-1:LOCATE·xx,b
PACO 630·PRINT·CHR$(ch);:p(xx,b)=ch:NEXT:WEND
     :ch=252:PEN·1:NEXT
PBHF 640·x1=1:WHILE·x1<>0:READ·xx,yy,x1:LOCAT
     E·xx,yy:PRINT·STRING$(x1,165);:FOR·a=xx·
     TO·xx+x1-1:p(a,yy)=165:NEXT:WEND
PBKF 650·x1=1:WHILE·x1<>0:READ·xx,yy,x1:LOCAT
     E·xx,yy:PRINT·STRING$(x1,166);:FOR·a=xx·
     TO·xx+x1-1:p(a,yy)=166:NEXT:WEND
EBMO 660·PEN·3:FOR·a=1·TO·10:READ·x,y:LOCATE·
     x,y:PRINT·CHR$(253);:p(x,y)=253:NEXT:PEN
     ·1
FCNI 670·READ·bad:FOR·a=1·TO·bad:READ·x(a),y(
     a),xmax(a):LOCATE·x(a),y(a):PRINT·CHR$(2
     55);:xx(a)=x(a):dir(a)=1:NEXT:x=1:xx=1:y
     =2:yy=2:READ·ti
```



Level two – it's even got conveyor belts. No cuddly toys, though, strangely enough.



Imaginative title – *Platform Game.*

```
CAMK 680·GOTO·140
EAMA 690·REM·Level·1
KCLG 700·DATA·1,24,20,12,22,6,4,11,6,1,3,5,5,
     8,1,3,5,1,4,19,2,1,10,1,7,18,3,13,2,8,13
     ,1,1,11,6,1,12,5,1,13,6,1,14,4,1,13,10,1
     ,14,9,1,15,8,1,16,7,1,17,6,1,18,5,1,15,1
     1,1,13,16,1,15,16,1,17,16,1,19,16,2,16,1
     4,1,18,14,1,11,21,1,1,1,0
GAPM 710·DATA·3,7,13,6,12,8,10,1,6,1,1,0
JACK 720·DATA·4,5,13,12,11,10,1,14,7,9,4,4,20
     ,5,9,1,1,0
DAEP 730·DATA·1,1,0,1,1,0
LAJG 740·DATA·3,6,5,15,5,9,7,17,9,3,10,14,11,
     3,15,10,15,21,20,15
FAFJ 750·DATA·2,1,23,20,5,10,9,99
EALA 760·REM·Level·2
PBIB 770·DATA·1,3,1,1,15,5,3,6,1,5,3,1,5,11,3
     ,7,4,5,8,7,5,12,5,7,13,2,8,13,8,1,14,7,3
     ,17,8,1,11,12,10,9,17,2,10,22,3,12,21,3,
     15,20,1,15,19,5,17,8,1,17,21,4,17,22,2,1
     ,1,0
BBPC 780·DATA·20,5,6,3,22,1,4,21,2,5,19,2,6,1
     7,2,7,19,2,9,9,3,10,9,2,11,1,3,12,1,2,18
     ,5,3,1,1,0
JAFC 790·DATA·4,6,8,6,2,8,7,7,3,8,12,11,20,5,
     6,1,1,0
FAPG 800·DATA·1,24,20,1,1,0,1,1,0
LAHM 810·DATA·2,18,4,23,7,18,9,16,10,3,13,3,1
     4,20,15,10,17,7,20,20
HAHG 820·DATA·3,7,6,11,12,6,17,10,11,20,120
EAKC 830·REM·level·3
NCMG 840·DATA·1,3,3,1,18,2,1,24,20,2,7,2,2,16
     ,2,2,20,2,2,22,2,2,23,2,3,1,2,4,4,2,4,12
     ,1,5,2,2,5,7,2,5,20,9,5,21,3,6,10,1,6,13
     ,1,7,3,1,7,8,3,7,11,1,8,2,4,9,6,1,11,21,
     5,10,4,2,11,11,3,11,16,4,12,19,3,13,13,4
     ,14,2,7,16,11,1,16,16,1,16,19,1,18,9,2,1
     8
PAOK 850·DATA·15,3,18,17,1,18,19,1,18,23,2,19
     ,13,1,19,21,1,20,5,1,20,12,1,20,17,1,1,1
     ,0
EBMJ 860·DATA·3,8,8,6,23,1,9,4,4,9,14,4,10,9,
     5,12,14,5,13,1,3,15,3,10,15,3,10,18,4,2,
     19,6,2,20,19,1,20,19,2,1,1,0
MAFD 870·DATA·1,7,10,4,16,7,6,4,5,14,6,6,16,4
     ,6,17,6,7,17,14,8,1,1,0
JAPN 880·DATA·5,15,3,7,23,1,8,19,4,10,23,2,15
     ,23,3,1,1,0
IACG 890·DATA·5,19,3,6,17,3,8,23,2,12,23,3,1,
     1,0
LAKG 900·DATA·1,23,7,2,7,7,7,10,9,9,13,14,11,
     10,16,10,19,5,20,16
GADC 910·DATA·2,6,22,16,13,17,16,140
EALC 920·REM·level·4
OBJC 930·DATA·1,3,1,1,12,1,2,5,3,2,13,9,5,2,1
     ,6,4,2,6,6,2,7,1,3,10,3,3,10,5,3,10,8,1,
     12,10,4,12,13,2,13,2,8,14,2,2,14,4,2,16,
     6,2,17,15,1,18,17,1,19,4,1,20,24,1,1,1,0
HBAO 940·DATA·1,22,2,2,8,4,3,1,4,3,22,2,4,8,4
     ,5,22,2,6,3,2,6,6,6,7,12,1,7,22,2,9,1,11
     ,11,15,4,12,14,2,13,1,1,16,14,4,19,14,11
     ,1,1,0
GABO 950·DATA·2,15,4,5,5,7,17,18,5,1,1,0
KALD 960·DATA·1,24,18,5,19,3,12,21,2,13,17,1,
     14,13,4,1,1,0
MALN 970·DATA·1,20,8,3,16,8,9,21,1,10,22,1,12
     ,19,1,18,13,2,15,16,1,1,1,0
LADG 980·DATA·1,11,2,23,4,6,6,5,9,17,10,4,14,
     14,17,14,20,3,20,10
HAID 990·DATA·3,2,12,6,3,14,11,3,15,10,200
```

Puzzle

Okay, the title's not up to much to much, But Chris was obviously saving his creative talents for the game itself. He's come up with a computer version of those simple little slide-the-tiles puzzle games that used to frustrate us all until we worked out the simple method of completing them – taking them to bits. There is another method, but I'm not going to tell you – you can work it out for yourself instead ('cos you can't take apart a computer version). Anyway...

```
GAPJ 10·REM·Letter·Puzzle
GAON 20·REM·By·Chris·Morgan
ABGC 30·DEFINT·a-z:DIM·n(16):x(1)=1:y(1)=1:SY
     MBOL·AFTER·64:SYMBOL·64,0
GAHM 40·FOR·x=1·TO·4:FOR·y=1·TO·4
OAPC 50·z=INT(RND*16):IF·n(z)=0·THEN·n(z)=1:p
     (x,y)=z·ELSE·50
HAJC 60·IF·z=0·THEN·x(3)=x:y(3)=y
DAPD 70·NEXT:NEXT
LAAN 80·MODE·0:PEN·1:PAPER·0:LOCATE·1,1:PRINT
     "MOVES·0
CBHO 90·FOR·x=1·TO·4:FOR·y=1·TO·4:LOCATE(x+3)
     +2*x,(y+6)+2*y:PRINT·CHR$(p(x,y)+64)
DAJG 100·NEXT:NEXT
HBJO 110·x(2)=x(1):y(2)=y(1):PAPER·1:PEN·0:LO
     CATE(x(1)+3)+2*x(1),(y(1)+6)+2*y(1):PRIN
     T·CHR$(p(x(1),y(1))+64)
MAKH 120·IF·INKEY(0)=0·AND·y(1)>1·THEN·y(1)=y
     (1)-1:GOTO·190
MAMH 130·IF·INKEY(2)=0·AND·y(1)<4·THEN·y(1)=y
     (1)+1:GOTO·190
MABI 140·IF·INKEY(8)=0·AND·x(1)>1·THEN·x(1)=x
     (1)-1:GOTO·190
MAKH 150·IF·INKEY(1)=0·AND·x(1)<4·THEN·x(1)=x
     (1)+1:GOTO·190
OALH 160·IF·INKEY(9)=0·THEN·x=x(1):y=y(1):PEN
     ·1:PAPER·0:GOTO·200
JADB 170·IF·INKEY(67)=32·THEN·CLEAR:GOTO·30
CAFK 180·GOTO·120
HCJN 190·PAPER·1:PEN·0:LOCATE(x(1)+3)+2*x(1),
     (y(1)+6)+2*y(1):PRINT·CHR$(p(x(1),y(1))+
     64):PAPER·0:PEN·1:LOCATE(x(2)+3)+2*x(2),
     (y(2)+6)+2*y(2):PRINT·CHR$(p(x(2),y(2))+
     64):GOTO·110
KCOO 200·IF·x>x(3)AND·y=y(3)THEN·st=1·ELSE·IF
     ·x<x(3)AND·y=y(3)THEN·st=-1·ELSE·IF·x=x(
     3)AND·y<y(3)THEN·st=-1·ELSE·IF·x=x(3)AND
     ·y>y(3)THEN·st=1·ELSE·PRINT·CHR$(7);:GOT
     O·110
PBBD 210·IF·y=y(3)THEN·FOR·a=x(3)TO·x·STEP·st
     :p(a,y)=p(a+st,y):LOCATE(a+3)+2*a,(y+6)+
     2*y:PRINT·CHR$(p(a,y)+64):NEXT:GOTO·230
JBGF 220·FOR·a=y(3)TO·y·STEP·st:p(x,a)=p(x,a+
     st):LOCATE(x+3)+2*x,(a+6)+2*a:PRINT·CHR$
     (p(x,a)+64):NEXT
LAKJ 230·LOCATE(x+3)+2*x,(y+6)+2*y:PRINT"·":p
     (x,y)=0
GCJI 240·t=t+1:cor=0:FOR·y=1·TO·4:FOR·x=1·TO·
     4:IF(p(x,y)=x·AND·y=1)OR(p(x,y)=x+4·AND·
     y=2)OR(p(x,y)=x+8·AND·y=3)OR(p(x,y)=x+12
     ·AND·y=4)THEN·cor=cor+1
IAOL 250·IF·p(x,y)=0·THEN·x(3)=x:y(3)=y
NAAE 260·NEXT:NEXT:LOCATE·6,1:PRINT·t:IF·cor<
     15·THEN·110
ADID 270·MODE·1:PRINT"Well·done.·You·have·com
     pleted·the·puzzlein"t"moves.":PRINT:PRIN
     T"Press·any·key·to·play·again":WHILE·INK
     EY$()"":WEND:CALL·&BB18:CLEAR:GOTO·30
```


L Typing listings

If you've never typed in a listing from *AA* before, then reading this following blurb is a REALLY GOOD IDEA.

- Basically, all you need to do is make sure you type in exactly what we print EXCEPT the first four letters in each line.
- The first four letters are a code which work in conjunction with our unique and utterly excellent *TypeChecker* program below.
- Only press RETURN when you get to the end of a command line. If a command line goes on to two lines do not press RETURN at the break in the line. Your lines on screen should break in exactly the same place as they do in the mag.
- The dots you see in some lines (like the one between well and done in PRINT"Well·done.") do not have to be typed in. They indicate spaces. They are there so that you don't have to guess how many spaces to put in when there are more than one.

TypeChecker

This is a program that enables you to check whether you have typed *AA* listings in correctly. Type it in, then SAVE it for future use. So, when you want to type in an *AA* listing, and you want to double check that you got it right:

- Load up *TypeChecker*.
- Type NEW.
- Type in the listing of your choice.
- When you've finished type LIST.
- At the end of every line a highlighted code will appear. It should correspond with the code printed in front of the same line in *AA*. If it doesn't you have typed in that line incorrectly.

```
PAML 10·'·TypeChecker·V1.0·-·By·Simon·Forrest
     er·-·Dec·1992
MAOJ 20·'·For·Amstrad·Action·-·Public·Domain
DANK 30·MEMORY·&9FFF
CAJK 40·csum=0
GAME 50·FOR·addr=&A000·TO·&A05B
DAKJ 60·READ·byte$
GAJB 70·byte=VAL("&"+byte$)
FACF 80·POKE·addr,byte
GAFB 90·csum=csum+byte
DALK 100·NEXT·addr
OACI 110·IF·csum<>&2ADD·THEN·PRINT·"Checksum·
     Error":END
LAHE 115·POKE·&A001,PEEK·(&BB5B):POKE·&A002,P
     EEK·(&BB5C)
KAHI 120·POKE·&BB5A,&C3:POKE·&BB5B,&3:POKE·&B
     B5C,&A0
MACN 130·PRINT·"TypeChecker·V1.0·Installed":E
     ND
MABC 140·DATA·CF,FE,93,FE,0A,CA,00,A0,F5,C5,D
     5,E5,FE,0D,CA,22
LACJ 150·DATA·A0,5F,16,00,2A,5A,A0,19,22,5A,A
     0,E1,D1,C1,F1,C3
LAFJ 160·DATA·00,A0,3E,20,CD,00,A0,3E,18,CD,0
     0,A0,2A,5A,A0,7C
LADI 170·DATA·CD,45,A0,7D,CD,45,A0,3E,18,CD,0
     0,A0,21,00,00,22
LACN 180·DATA·5A,A0,C3,1B,A0,F5,E6,0F,C6,41,C
     D,00,A0,F1,E6,F0
KAJC 190·DATA·1F,1F,1F,1F,C6,41,CD,00,A0,C9,0
     0,00,END
```

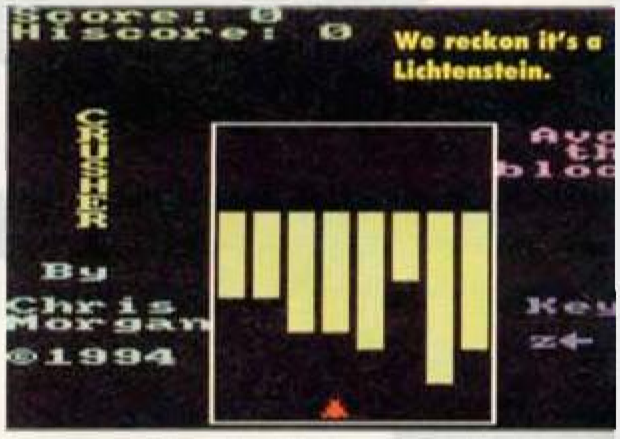
Turning *TypeChecker* off (it is automatically initialised when you RUN the program above) and back on again is quite simple:

```
POKE &BB5B,0    To turn it off
POKE &BB5B,3    To turn it back on again
```

Isn't science amazing? (Now don't argue.)

Workshop

This month's dissected program is a fabulous little listing by that Chris Morgan bloke, a game called Crusher. The concept is really quite original, so you should have a bit of fun with this. The screens, nurse...



We reckon it's a Lichtenstein.

Line 90

This Chris Morgan is a man who believes in doing things the quick way – instead of dimensioning these variables one by one, he's done about four million on the one line. In case you're wondering dimension variables are simply variables that have depth – they can act like a pile of numbers instead of a single one. Let's take a look and see how it works:

```
10·DIM·a$(5)
20·FOR·1=1·to·5
30·INPUT·a$(1)
40·NEXT·1
```

Instead of working with five different variables, we've worked with five variables, all of which have the same name. This has obvious advantages, as we've just seen – the other method would have involved five INPUT commands. The other advantage to this is that we could easily get the computer to pick a string at random, or deal with hundreds of text strings in one go.

Line 140

This line demonstrates one of Locomotive BASIC's most incredibly handy features – its ability to smarten up your programs by using windows. Though they're not nearly as advanced as the windows in the package by the same name that used on the PC, they'll still be a great help. Let's say that we want a window five characters by five characters at the top-right of the screen, we'd use this command:

```
WINDOW·#1,36,40,1,5
```

The first figure, #1, refers to the reference number of the window we're setting up. The next four numbers are the left, right, top and bottom edges of the window, in character measurements (the same as the LOCATE command). Obviously, this window would appear roughly in the middle of the screen if we were in mode 2, but we'll work in mode 1 for now.

If we wanted to change the colour of the paper or the pen, we'd use the following commands:

```
PAPER·#1,[pen]
PEN·#1,[pen]
```

Obviously, you'd replace the [pen]s with the pen colour you wanted to use, but that's how you'd do it. Printing is also very easy:

```
PRINT·#1,"Hi·there"
```

Using these modified commands, we can display eight windows numbered 0 to 7, though window 0 is the window that's normally the screen. Printing to window #8 will send text to a printer if you've got one, and #9 will send text to any file you've got open, but you don't need to worry about that right now.

CRUSHER

```
EABG 10·REM·Crusher
GAOP 20·REM·by·Chris·Morgan
DACD 30·REM·(c)·1994
BAIG 40·REM
GALI 50·DEFINT·a-z:DEFSTR·c,s
EBOD 60·INK·0,0:INK·1,24:INK·2,22:INK·3,20:IN
     K·4,6:INK·5,19:INK·6,26:INK·7,17:INK·8,1
     1:BORDER·0
JAAE 70·SYMBOL·254,126,126,126,126,126,126,12
     6,126
HAAO 80·SYMBOL·255,24,24,24,60,60,60,126,90
JAAD 90·DIM·b(14),c(14),y(14),yy(14),dir(14)
PAGO 100·sc%=0:MODE·0:PEN·2:PRINT"Score:·0":P
     RINT"Hiscore:";hi
EBPL 110·PEN#1,1:WINDOW#1,3,3,7,14:PRINT#1,"C
     RUSHER";:s=CHR$(255):a$=CHR$(254)++CHR$(
     10)+CHR$(8)
JAME 120·cc="":FOR·a=1·TO·3:cc=cc+a$:NEXT
DBBL 130·PEN#1,3:WINDOW#1,1,6,16,22:PRINT#1,"
     ·By·········Chris·Morgan·····";CHR$(164
     );"1994
PAOP 140·WINDOW·#1,15,20,8,10:PEN·#1,7:PRINT#
     1,"·Avoid··the·blocks";
CBIH 150·WINDOW#1,16,20,18,20:PEN#1,8:PRINT#1
     ,"Keys······z";CHR$(242);"·";CHR$(243);"
     x";
OAMM 160·PLOT·190,10,6:DRAW·190,290:DRAW·450,
     290:DRAW·450,10:DRAW·190,10
HAGM 170·FOR·a=7·TO·14:GOSUB·430:NEXT
FAAM 180·xx=10:x=10:GOTO·240
FACD 190·REM·controls
BBFH 200·c=LEFT$(UPPER$(INKEY$),1):IF·c=""THE
     N·270·ELSE·WHILE·INKEY$<>"":WEND
JADK 210·IF·c="Z"AND·x>7·THEN·x=x-1:GOTO·240
JAMM 220·IF·c="X"AND·x<14·THEN·x=x+1:GOTO·240
CAHK 230·GOTO·270
ABFO 240·LOCATE·xx,24:PRINT"·";:LOCATE·x,24:P
     EN·4:PRINT·s;:PEN·1:xx=x
FANM 250·IF·yy(x)>24·THEN·360
FABP 260·REM·Move·blocks
JAEF 270·FOR·a=7·TO·14:IF·dir(a)=-1·THEN·300
OAJO 280·IF·yy(a)=25·THEN·LOCATE·a,24:PRINT"·
     ";:GOSUB·330:GOTO·320
IBPG 290·LOCATE·a,y(a):PRINT"·";:LOCATE·a,yy(
     a):PRINT·CHR$(254);:yy(a)=yy(a)+1:y(a)=y
     (a)+1:GOTO·320
MBKC 300·IF·y(a)>8·THEN·yy(a)=yy(a)-1:LOCATE·
     a,yy(a):PRINT"·";:y(a)=y(a)-1:LOCATE·a,y
     (a):PRINT·CHR$(254);:GOTO·320
HBGO 310·LOCATE·a,8:PRINT"·";:LOCATE·a,yy(a):
     PRINT·CHR$(254);:yy(a)=yy(a)+1:y(a)=y(a)
     +1:dir(a)=1
JAPD 320·NEXT:IF·yy(x)>24·THEN·360·ELSE·200
CBFK 330·IF·LEN(c(a))=1·THEN·sc%=sc%+1:LOCATE
     ·7,1:PEN·2:PRINT·sc%:PEN·1:GOTO·430
ABMI 340·c(a)=LEFT$(c(a),LEN(c(a))-3):dir(a)=
     -1:yy(a)=yy(a)-1:RETURN
EAKK 350·REM·crushed
IBFH 360·FOR·a=1·TO·250:FOR·b=1·TO·2:OUT·&BC0
     0,6:OUT·&BD00,25:OUT·&BC00,7:OUT·&BD00,3
     3:NEXT:OUT·&BD00,20:NEXT
DAOG 370·OUT·&BD00,31
MBKK 380·PEN·1:LOCATE·x,24:PRINT·CHR$(254);:L
     OCATE·1,3:PEN·4:PRINT"You've·been·crushe
     d":IF·sc%>hi·THEN·hi=sc%
JALD 390·PRINT"Press·a·key·to·play
JAAG 400·IF·INKEY$<>""THEN·400·ELSE·CALL·&BB1
     8
CAPJ 410·GOTO·100
GAMM 420·REM·create·blocks
ABFN 430·PEN·1:c(a)=cc:b(a)=INT(RND*8)+INT(sc
     %/5):IF·b(a)>14·THEN·b(a)=14
IBKM 440·FOR·b=1·TO·b(a):c(a)=c(a)+a$:NEXT:c(
     a)=LEFT$(c(a),LEN(c(a))-2):b(a)=b(a)+3:y
     y(a)=8+b(a):y(a)=8
IAHK 450·LOCATE·a,8:PRINT·c(a);:RETURN
```

Lines 360 to 370

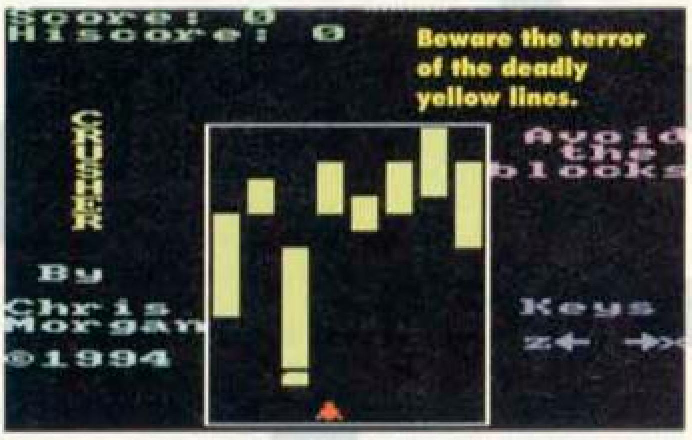
I just thought I'd mention this little routine, as it was featured in the Easy Street feature in issue 98. All it's really doing is shaking the screen using the CRTC chip, which controls the screen picture. You don't need to know exactly how it works, just that you can use it to shake the screen for whatever reason you have.

Line 430

Have we discussed how to produce random numbers? It's quite simple, so a quick recap wouldn't be too painful. There is a system variable called RND, which produces random numbers. It's called a system variable because you can't give it a value – it's variable, and generated by the system. The random numbers this variable produces are between 0 and 1, so we need to do something to get more utilisable figures, such as multiplying RND by the maximum number we want to produce. For example, if we wanted to produce a random number from 1 to 5, we'd multiply RND by 5. We would also like it to be a whole number, though, (none of those messy little fractions, thank you) so we need to use the INT operation. So if we wanted to print this value, we would use:

```
PRINT·INT(RND*5)
```

Random numbers are damned useful, by the way – if you want your prize-winning game to have any unpredictable alien movements or starting position, you're going to need to know how to generate them.



Beware the terror of the deadly yellow lines.

The Examiner

Looking for that adventure of a lifetime? This month Debbie Howard recommends a couple of adventure-orientated fanzines that just might help you find it...

Lords & Ladies of Adventure

If you are stuck on one of the games listed below, these kind souls are willing to help you. Please remember to enclose an SAE with your enquiry and DON'T ask for a full solution, as you might be disappointed. If you want to become a Lord or Lady please write to The Examiner, *Amstrad Action*, 30 Monmouth Street, Bath, Avon BA1 2BW. Go on, you know it makes sense.

- *Five On A Treasure Island, Werewolf Simulator* – Samantha Blair, 21 Obelisk Rise, Kingsthorpe, Northampton NN2 8QT.
- *Five On A Treasure Island* – Tommy MacDonald, 7 County Cottages, Piperhill, Nairn.
- *Adult II, Bew Bews, Blue Raider 2, Can I Cheat Death?, Doomlords 1-3, Dick-Ed, Escape From The Planet Of Doom, Firestone, Jason And The Argonauts, Lords Of Time, Nite-Time, Red Moon, Spaced-Out, Welladay, Yawn* – Paul White, 18 Conifer Road, Coxford, Southampton, Hampshire SO1 6FX.
- *Shard Of Inovar, Five On A Treasure Island, Holiday 2, Mell, Hobbit, Lords Of The Rings, Shadows Of Mordor, all Dizzy* Games – Andrew Hughes, 12 Colliers Close, Woodhouse, Sheffield, S Yorks SY3 7DE.
- *4th Protocol* (parts 1 &2), *Knightmare, Mega Bucks, N.E.X.U.S.* – Andy Riddings, 10 Berkshire Street, Chaddesden, Derby DE21 6SQ.



Adventure 'zines

I have had several letters from readers asking if there are any magazines aimed solely for Amstrad adventurers. Unfortunately there are none to my knowledge that deal only with the Amstrad but there are a couple that include all computer formats. So this month instead of the usual adventure review, I thought I would review these magazines instead.

Adventure Probe

Price: £2.
Address: 52 Burford Road, Liverpool, L16 1QH.
Cheques/Postal Orders payable to: *Adventure Probe*

Now in its sixth year, *Adventure Probe* has gone on from strength to strength outlasting all other adventure magazines. With its friendly and informative manner, it's easy to understand why. There are approximately 60 pages each issue, filled with reviews, tips, objects and their uses, letters and so on. The magazine has become so popular with adventurers that every year the 'zine holds a convention just so that they can meet.

Red Herring

Price: £4
Address: 504 Ben Jonson House, Barbican, London, EC2Y 8NH.
Cheques/Postal Orders payable to: Marion Taylor

Released bi-monthly, *Red Herring* has been running for just over two years. Its main aim is to include maps and full solutions, but it carries other features as well; hints, letters and general information are all to be found amongst its pages. Although you may find it rather pricey it is beautifully presented and the February issue had over 85 pages.

Where to go

If you're looking for new and re-released adventures, drop these people a line (enclosing an SAE) for their latest stock lists.

- WoW Software, 78 Radipole Lane, Weymouth, Dorset DT4 9RS.
- Amstrad Adventure Solution Service, 10 Overton Road, Abbey Wood, London SE2 9SD.
- Adventure Workshop, 36 Grasemere Road, Royton, Oldham, Lancashire OL2 6SR.
- Moonshine PD, 19A Kenyon Avenue, Garden Village, Wrexham, Clwyd, LL11

Letters

Dear Examiner,
I would like to tell you about my Amstrad CPC adventure PD Library. I am just starting out and at the moment I am trying to get enough Homebrew adventures to fill a couple of discs. The idea of my PD library is to have previously unreleased software and to give good value for money. I will be offering a playtesting service for both PD and TBR. But my main concern is getting the adventures in the first place. If anyone is interested in playtesting or having their adventure playtested they are welcome to send me an SAE for an "information pack". (See Moonshine in the Where To Go Box for the address).
The Beast (Martin Greenhalgh), Clwyd.

Following in the footsteps of Adventure PD are we? Anyway I wish you luck! **Debbie**

Cluepot

The last in the series of tips for *Five Of A Treasure Island* sent in by Stephen Bosco.

33 Go to tower (ruined tower) and drop crumbs and get the sticks.
34 Eat sandwiches and get paper.
35 It is easy to give the matches and the sticks to Anne because she has the paper.
36 Wait until the storm comes.
37 Enter whole room.
38 Wait for you to get a cold.
39 Drop sticks.
40 Light paper with match.
41 Light stick with burning paper.
42 Drop paper.
43 The storm had gone now, go to Rocky Headland and enter boat (wrecked ship).

READER ADVERTS

Bargains galore and much, much more in the CPC second-hand superstore. Or, in other words, here are the small ads...

FOR SALE

Master System 2 with three games, mains adaptor and lead to connect to TV. £90 or nearest offer. Tel 0748 834295 after 5pm.

CPC disc and tape games. Including Lemmings, Roadblasters, Mini Office 2. Worth £200 plus. Will sell all for £70 or separately. Also DMP 2000 printer only £85. Phone 0573 223459 for details.

CPC6128, colour with HR5 printer, 3.5-inch drive. Not been used. Tape lead. Over 40 discs plus some blanks and a few tapes. £300 the lot ovno. Ask for Geoff. 0246 570215.

Amstrad CPC464, colour monitor, £80.

CPC6128 ROM chip £15. Dart Electronics Light Pen £20. ProText CPM+ (disc) £30. Mini Office 2 (disc) £8. Many games and magazines. For details SSAE to Julian Cater, 29 St Leonards Road, London, SW14 7LY.

Magazines, games, books for CPCs for sale (including Soft 158 Firmware Guide). Second-hand. Good condition. Send SSAE for list to A Swinbourne, 11 Vicarage View, Redditch, Worcs B97 4RF. Phone 0527 68419.

Colour monitor Amstrad CTM 644. £80ono. 0323 647318.

Amstrad 464 Plus, comprises colour monitor, keyboard, 3.5-inch disc drive, printer, 20 plus software titles, PD software, magazines, joypad, all manuals provided. Pristine condition. A bargain at £275ono. Phone 081 443 4586.

Amstrad CPC6128 colour monitor, joystick, Multiface 2, 20 disk games, manuals £115ono the lot. Also TV modulator £25. Cash only. Buyer collects. Ray Edwards. Tel 021 743 3569 after 6.30pm. (West Midlands).

DMP2000 printer, modem, Multiface 2, P2 Interface, DDI disc drive, disc boxes, Eproms, Eprom Eraser, Poolswinner, MAXAM, manuals and books. For list and prices write to Ian, 245 Tarbock Road, Huyton, L36 0SD. Telephone 051 480 9931.

Multiface 2 for 6128 £20. Advanced Art Studio on disc £12. Disc games £5. Tape games £1. Please phone for details. Everything in excellent condition with manuals, etc. Tel 0234 870571.

Soccer Management game, many features including team selection, transfers, suspensions, injuries, tactics and more. Send £3 plus 30p p&p to Demon Games, 6 Greave House Terrace, Lepton, Huddersfield, West Yorkshire, HD8 0DQ. Great value. Tape only.

Software. Cassettes from 60p each. Discs from £1 each. Cassette deck, good loader. Over 300 items. All originals. Some blank discs. SEnd SAE for list to Mr W Learoyd, 42 Stanley View, Armley, Leeds, LS12 1TS or phone 0532 319383.

Amstrad 6128. Some disc games. Loads of tape games, tape recorder leads. Colour monitor. Printer cable, CPM discs, manual, Amstrad magazines, joysticks. £100ono. 0827 716116.

Amstrad CPC 6128, CTM664 colour monitor, tape deck, Advanced Art Studio, ProSpell, ProText, lots of Software, mouse, joystick. £260ono. Ring John on 0252 319312. Aldershot, Hants.

Bargain: CPC6128 with colour monitor, tape deck, manual, four teir desk, joysticks, many games and Mini Office 2. All vgc, all for £100 Call Jim on 081 657 2795.

3.5 external plug-in disc drive. Fits Amstrad 6128, 464 computers. Brand new. Never used. Still in box with instructions. Cost £70. Will accept £42ono. Jonathan, Selby, North Yorks 0757 248756.

CPC6128, colour monitor, datacorder, Multiface 2, Insider, Mini Office 2, magazines, games on disc and tape £140. Phone Terry 0536 518902.

36 tape games for sale. Amstrad CPC464. All originals. Price £20 for the whole lot, ono. Send a SSAE for a list to Matthew Glover, 12 Garrick Street, Alvaston, Derby DE24 8PT.

Printer for sale. Amstrad DMP2000. Package includes four ribbons, printer lead and full user manual. Immaculate condition. £70 plus p&p. Phone Chris on 0785 841010.

CPC464, colour monitor, games, magazines, joysticks, £120ono Also Megadrive, six games, two joypads, Aviator 3 joystick, mags, 2.5 year guarantee. £90ovno. Buyer collects. MJ Richardson, 25 Beckenham Gardens, Hemlington, Middlesborough, Cleveland TS8 9JU.

Amstrad CPC6128. Colour monitor, tape recorder, joystick, lots of games on tape, discs, books, excellent condition, £160ono. Tel: 0327 310297. Northants.

Amstrad CPC464 colour monitor, DMP3250di printer, tutorial tape, Tasword, approx 90 games (assorted), joysticks, some magazines, standard manual, small desk included. £120ono the lot. Call Steve evenings 0264 4772223 or mobile 0860 571683.

CPC464. Vgc. Colour monitor, 60 games including nine carts, manuals, Joypad, £150ono. Boxed games from £1. AAs 30-99 with tapes from 75p. For details Phone Andrew 0602 202877.

CPC464 (worn cassette) GT64, MP-1, DDI-1 (needs attention), joystick, printer cable, Soft 158 specification, discs, software. Good condition except as noted. £120 complete or will split. Tel 0707 334346 (evenings).

Just about every Amstrad magazine ever printed for sale. All to be sold together. If not sold will be thrown away. Wife's orders. Carl Surry, 37 Fairfield Way, Barnet, Herts EN5 2BQ.

Amstrad CPC464, 664, 6128 cassette games from £2. List available. AA back issues 91, 93, 95, 96, 98, 100 £1 each. Winter Games, Star Strike, Super Hang-On, Buggy Boy, Robocop. Tel 0582 581259.

Amstrad 6128 Plus (boxed) with colour monitor, immaculate condition, manual, joypad, cassette player, games (disc and tape). Altogether worth £500. Will sell for £300 ovno. Everything must go! Phone Adrian 061 681 3354.

Cassette and disc software. Over 50 titles all going at £2 or under. Including Potsworth & Co, Hard Drivin', Robocop and many more. For details send SAE to A Seaton, 37 Whirlowdale Crs, Whirlow, Sheffield S7 2NA.

Amstrad 464, colour monitor, DDI drive, Star printer, Multiface 2, 6128 expansion, mouse, light pen, MP1-TV tuner and £300-worth of software, including Advanced Art Studio. £350ono. Tel Iain 0506 414876 (Livingston).

Printer AEG Olympia ESW 2500i daisywheel, RS232 or Centronics, wide carriage, full working order, in superb condition. Includes dust cover. Only £50. Ring 0883 715193.

CPC464 keyboard £25. Green monitor £25. Colour monitor £50. Games 50p each. Joystick new and boxed £4. Ring 0883 715193.

CPC6128 with green screen monitor, MPL line printer, discs, tapes, books and mags. £100. Jeff, Colchester, 863937.

Games over 100 classics on tape and disc including Bard's Tale, Mini Office 2, X-Out. Cheap prices. For list send SAE to Mr KM Williams, 4 Kingston Gardens, Beddington, Croydon CR0 4TX.

40 Amstrad Actions with tapes. £40 plus £5 p&p. RAMDOS £10. MAXAM plus ROMbox £25. MAXAM plus ROMboard £20 plus p&p. Tel 0302 864730.

165 tape games. 10 compilations from 50p to £5. SAE to Darren Littlewood, 33 Clay Flat Lane, Rossington, Doncaster South Yorks DN11 0AZ.

Amstrad 6128 Plus with mouse, ROMbox, Protext ROM, cartridge games, controller and joystick £200. Amstrad Action magazines in Binders issues 1-41. Best offer secures. 071 652 1197.

Amstrad 464 Plus with monitor, joypad, printer, disc drive, manual, disc games and lots of games on cassette worth over £800. Sell for £500 ono. 0246 239113 after 6pm.

Amstrad CPC6128, colour monitor with system discs, Mini Office 2 £75. Protext, CP/M+ version with ProMerge, ProSpell £30. Gunship disc £5. Elite manual £2. Plus Postage. 061 620 2118. Bob. Oldham.

Amstrad CPC464, green screen monitor, 140 plus games, Bug joystick. Excellent working order. £140ono. or exchange for Amiga 500 or 500 Plus. With or without game discs or exchange for CD player depending on make. Also Amstrad Action mags plus covertapes. Will not split. 0287 650720 after 3pm.

Tape games sale. All under £4. Send SAE for list to Karl Phillips, 21B Lewisham Park, London, SE13 6QZ.

Atari 800XL, handbook, 70 games, £15ono. Will swap for DDI drive interface. Also Amstrad cassette games for sale. For a full list write to Andrew Hurt, 46 Henry Street, Debenham, Suffolk IP14 6RH.

CPC6128, CTM644, ProText, ProMerge Plus, Utopia, MAXAM 1.5, SDOS, ROMs, 3.5-inch drive, Stop Press with mouse, Multiface 2, Soft968, applications and games. ACU and AA magazines, etc. All for £150. 041 634 2344.

CPC6128 with manuals, colour monitor, 3-inch drive, cassette deck with leads, joystick, 11 magazines with covertapes and over £180 of games. £330ono. Buyer collects. Call Paul on 0945 860389.

464 Plus as new. Two joysticks. 120D printer, Laser Gun. All leads. 40 plus games. 3 cartridges. 15 copies of AA and tapes. Tel 0630 654597 (Shropshire). £250ono.

Amstrad CPC 6128 with CTM644 colour monitor, joystick and user instruction book. Hardly used. Includes Amsoft utilities disc and Dr Logo. Call 0373 452680 for Mike (Frome). Bargain £120ono.

MP-3 Modulator TV tuner boxed as new. Never used. £20 or will swap for speech synthesisers for 464. Epyx cart for Plus machines £650. Call Cannock 0543 506095 after 4pm (Tim).

30 Amstrad Games £11 and also Sonic 3, Zool and Sensible Soccer for £35 each. Send cheque to 11 Flamborough Close, Skegness, Lincs PG25 1HR. PS Send to James O Epton.

CPC464, colour monitor, joystick, 150 top games, filter, demonstration tape and book all in very good condition. Ask for Dominik. All for £125ono. 081 952 6932.

Dragon 32 games for sale starting from £2.50. For full list send SAE to Craig Chadwick, 70 Wellington Road, Todmorden, Lancs OL14 5EH.

Magazines for sale. Amstrad Computer User, also Computing With The Amstrad, plus CWTA Incorporating Amtix. Various issues from August '85 to June '88. Phone for details. 071-822 3727. Ask for Roger.

18 Sega Game Gear games. Wide range including Popils, Olympic Gold, Super Off-Road. All with boxes and instructions. In VGC. £12 each ono. Tel 061 969 1847.

Amstrad CPC 6128 with colour monitor, Mini Office 2, CPM discs, CPM Plus, many discs, mags and manual, £180. Price includes courier delivery. Tel Arthur 041 883 4421 (Glasgow).

Multiface 2 for sale. Excellent condition and hardly used. All fully boxed and with instructions. If interested please contact Mark on 0202 891250 between 6-8pm.

Amstrad CPC464, mono monitor, manual, £200 plus software, joystick, 12 AAs, word processor, Epsom MX80 printer. £210ono. Write to Kriss at 19 George Eliot Avenue, Bedworth, Nuneaton, Warks CV12 9ET. Tel 0203 318575.

464 with ProText, DDI-1, discs, 35 AAs, tons of discs, tapes, loads of software, etc. £300ono. All reasonable offers considered. Ring now on 0529 306256 after 6pm weekdays, anytime weekends.

Buying goods through the post

There are loads of great bargains to be found in this Reader Ads section and the other adverts scattered through the magazine, but some of you might be a bit reticent about sending money through the post for goods you haven't seen to somebody you've only talked to over the phone. But don't panic. Just follow our simple guide to buying goods by post to minimise any risks.

✂ Before ordering anything try to contact by phone to the person or company advertising the goods you want. Write down a list of questions you want to ask them – clarify the price, who will pay for delivery, compatibility, etc.

✂ Confirm a delivery date – ask how long you can expect to wait before the goods will be delivered (with official companies it should be within 28 days).

✂ Never send cash through the post. If possible use a credit card because it will probably give you some form of insurance. Failing that use a cheque or PO.

✂ Keep records of all correspondence and phone conversations with the people you're ordering stuff from.

✂ If a problem does occur, the first place to contact is the person or company you're ordering the goods from. Be calm and explain the problem clearly. Most faults are just mix-ups and can be sorted out.

✂ If, however, you continue to have problems write to us here at Advertising Complaints, *Amstrad Action*, 30 Monmouth Street, Bath, Avon BA1 2BW.

Two rare to come by tape games. Armageddon Man, £3 and Mind Fighter including novel $4. Phone Karl on 081 690 7940.

DDI disc drive, good condition, with CP/M 2.2. Ideal for CPC464. £75ono, contact T Miller, Pakefield, Lowestoft, Suffolk NR33.

Amstrad CPC464, colour monitor with keyboard, tape driver, two joysticks, 100 games with manual. £110 0634 370631.

CPC464 Plus, vgc. Colour monitor, 60 games including 9 carts, manual, joypad £150ono. Boxed games from £1. AAs 30-99 with tapes from 75p. For details telephone Andrew on 0602 202877.

CPC464, colour monitor, DDI disk drive, FDI disk drive, Multiface 2, TV modulator, 41 AA mags, 44 discs, 80 tapes, Light Pen, Joystick, utility discs, Mini Office 2. £295. Tel Alan 0293 771693.

Budget release cassettes. Titles including Mission Genocide, The Trap Door, Super Hero, Classic Muncher, Zub, Fast Food. Phone for complete list. 071 822 3727. Ask for Roger.

Protext ROM and Graduate Software CP/M Plus ROM for sale £10 for Protext £15 for CPM. Call Ronald on 0738 29536 (Perth).

Rombo ROMbox with 8 ROMs: ProText, ProMerge, ProSpell, Odd Job, etc. £60 MP2 modulator £20. Books and games, tape and disc. Phone for list. John 0633 857376. Newport Gwent. Postage extra.

Amstrad Action issues 51, 53 to 100, each £1.30 or £13 per 12. Also SYBX programming programming the Z80 by Rodnay Zaks £15. Write to Iain Quigley, 14 Bute Court, Greenock, Inverclyde, Strathclyde, Scotland PA16 7AG.

CPC games for sale including Batman The Movie, Seymour Goes To Hollywood, HUdson Hawk, compilations and more. Tape and discs from 50p. Send SSAE for list. 21 Dane Bank Avenue, Crewe, Cheshire CW28AE.

Amstrad CPC6128, green screen, Fo-1 2nd disc drive, business software £70. 3.5-inch 2nd disc drive with 3rd drive switch and MS800 formatting software £45. Tel 0727 856181 after 4pm.

Great tape games for sale. Prices up to £8. Titus The Fox, Soccer Stars, Hudson Hawk and loads more. Write to John Sinclair, Ivybank, 2 Low Green Road, Irvine, Ayshire KA12 8RA.

CPC6128 DK'Tronics 256K memory £75. Multiface 2 £20.many books (manuals and general CPC stuff). 0404 44154.

WANTED

Help! I am looking to purchase an Amstrad computer new/secondhand and IBM/PC compatible. For spreadsheet, database, wordprocessor, drawing, etc. Write to Chris, 8 Shipton Street, York, YO3 7AU. 0904 679914.

DDI-1 disk drive for 464 Plus. Also wanted, Sim City on tape. Good price paid. Phone Garry Nelson on 049 084306 (after 4pm).

PD games wanted for a new PD library. Tape or disc. Send to TPD, 88 Ship Road, Pakefield, Lowestoft, Suffolk.

RAM Music Machine interface and software. Will pay up to £10. Tel 0225 722899 after 7pm.

Amstrad 6128 games wanted. Disc or tape. Also some for sale or swap. Also anything else interesting you may have. SAE with your list to 28, The Rally, Arlesey, Beds SG15 6UJ.

Wanted: Extreme, Spindizzy, Scooby Doo, Helter Skelter, Nebulus, Pang. Telephone Ben, 0902 676171.

Wanted: A 3-inch disk drive for the 464. I will swap for two megadrives games. Phone for details on 0473 216891 after 4pm.

Atari 130XE TV-switchbox wanted urgently. Telephone 0295 267140 after 5pm and ask for Mr F Merritt.

MPI modulator in exchange for GT65 green monitor. Contact Adam on 0507 605120 after 6pm. If you get answering machine leave message and telephone number.

Wanted: Heroquest and Football Manager One. Will swap for Midnight Resistance, Turbo Tortoise or Afterburner. All cassette. Wanted for CPC464. Write to Lee Cleary, 20 Arcacia Avenue, Maltby Near Rotherham, South Yorkshire S66 8DS.

CPC 464 Plus, colour monitor or modulator MP1 Plus. Phone Jamie on 0743 874156.

Wanted: Continental Circus, Nigel Mansell's World Championship and Powerdrift. I will give a good game for any of these. Telephone Alasdair 0828 4483 after 5pm. Cassette only.

Public Domain software wanted for new disk PD library. Anything from games to utilities. Please send to Colm Moriarty, Bree, Enniscorthy, Co Wexford, Ireland.

Keyboard for Amstrad PCW8512. Contact Mr H Greer, 15 Wigton Avenue, Leyland, Preston, Lancs PR5 1AJ.

Wanted: Sim City on cassette. Also Multiface 2. Phone me after school hours on 0343 549408 or if you prefer write to 4 St Andrews Square, Pinefield, Elgin, Moray, Scotland IV30 3HX.

Wanted: AA covertapes 4 and 7 from the magazines AA70 and AA73. Also want magazine only – AA83. Phone 081 575 2979 evenings only. Will pay up to cover price. Ask for Robert.

Multiface 2 for 6128 Plus. Will pay up to £20. Phone Steve on 061 652 5242 (Oldham). Or will do swaps.

Help! I'm stuck on programming. I need a pen pal to help me do some programming on my CPC 6128 disc drive. If you can help contact George on 0981 240057 (evenings).

Amstrad Actions 1-65, 71, 72 and 74 with covertapes in good condition. Will pay 50p each or £35 for the lot. Stuart Mainland, 2 Douglas Road, Coylton, Ayrshire, KA6 6JJ.

Printer compatible for Amstrad CPC464, colour or mono. Write to: Emily Parle, 32 Broadhurst Gardens, Sandford, Oxford, OX44 4YQ.

PC 286. Must be cheap and have hard drive. RAM does not matter. Will pay up to £150. Exchange 464 extras £300 software. Write Kris, 19 George Eliot Avenue, Bedworth, Warks CV12 9FT.

Wanted: Absolutely anything to do with Amstrad programming from hints/tips to game/demo programming and cheat type-in pokes. Anything PD. If enough responses with aim to start Amstrad programming help tape with possible mag later.

Software disc to control DK'Tronics 256K memory expansion unit for 6128. an anyone help? Peter Palfreyman, 33 St Mary's DRive, Thorngumbald, North Humberside HU12 9NS. 0964 623656.

EMR MIDItrack system (tape) desperately wanted. Will pay reasonable price. 464 version please. Contact Ronnie O'Rourke, 166 Westburn Road, Westburn, Cambuslang, Glasgow. Or phone 041 641 1179.

Prince of Persia or Jack Nicklaus Golf wanted on disc for 6128 Plus. Will pay reasonable price. Also wanted Kick Off 2 also for 6128 Plus. Phone 06626 70490 after 5pm weekdays.

Penpals, any age (yes, even yours, Ed) male or female who can help me understand the Amstrad 464. Am I too old to learn? I know Basic, it's the technical part I would like to get to know better. I am 57 with no job. I have plenty of time on my hands. Nora Less, 285 Franklin Road, Cotterbridge, Birmingham B30 1NH.

Colour monitor. Exchange Green monitor plus cash. For CPC 464. Also leads for colour TV. Also games lists wanted. 0200 24601.

Light Gun for Amstrad CPC464. Will pay up to £5. Telephone: 0872 77936 and ask for Joseph or write to Willow Green Farm, 3 Mile Stone, Truro, Cornwall.

Penpals wanted aged 14-18. Needed to help me understand the CPC464. I'll reply to everyone that writes. Write to: Sherry Field, 73 Bach Close, Brighton Hill, Basingstoke, Hants RG22 4JZ.

Wanted desperately: Rainbird's Advanced Music System on disc (boxed). A fair rice paid. Please ring Howard on 0403 241240 anytime. If answerphone please leave your name and number.

Help! Could anybody help me with any of the Dizzy games. Hints, tips or maps. Help before I go insane. Paul Pryers, 4 Gaddeston Grove, Welyn Garden City, Herts. 371805.

Wanted! Wanted! Wanted! AA1 and AA2 (in readable condition if possible). Write to Bruno, Postfach 43, 8804 Au, Switzerland (*sorry about last time – Ed*).

Wanted: tape deck for Amstrad CPC6128. Will pay up to £8. Contact Simon from 5.30pm to 9pm on 0634 574007.

SERVICES

Amstrad CPC/Plus home-programmed software for sale (not PD). For a paper catalogue of Amstrad software send SAE and 10p to Derek Payne, 89 Wolverhampton Road, Codsall, Wolverhampton WV8 1PL.

PBM games. If you like PBM games write to PBM Rock Group, Lower Dexbeer, Dexbeer, Holsworthy, Devon EX22 7LA. Or phone 0288 82348 after 6pm and ask for Paul.

The Office Disc: looking for top serious PD programs like word processors, speadsheets and databases? Send disc, SAE and £1 to David Crookes, 37 Trimingham Drive, Bury, Lancs BL8 1JW.

The Entertainment Disc: lots of PD games (Zapt'T'Balls, POwer Tetris Puzznix, etc). SEnd a disc and SAE and £1 to David Crookes, 37 Trimingham Drive, Bury, Lancs BL8 1JW.

The Entertainment Disc 2: Lots more PD games (Jumpmania, Les Mings). Superb. Send disc, SAE and £1 to David Crookes, 37 Trimingham Drive, Bury, Lancs BL8 1JW.

Buy and sell computer magazine. Free advertising. Send SSAE for details or £1.50 for largest magazine. Payable to D Howard, 10 Overton Road, Abbey Wood, London SE2 9SD.

OTHER STUFF

Coming soon: Seander's Mag with cheats, stories, puzzles and much more. Tel: 0483 814321 for a subscription.

Pen Pals, male and female aged 17 to 25 from any country to swap programs. All letters will get a reply. Ali Halabi, 85 Thames Prom, Chelsea, Victoria 3196, Melbourne, Australia.

Wanted dead or alive (preferably alive): PD contacts to swap PD on disc/tape. Write to Tom Dean, 53 High Lane, Burslem, Stoke-on-Trent, Staffordshire ST6 7DF.

Do you have Graduate Software's CPM+ on ROM? Have you moved and would like to change your address on the ROM? I can help. Call Perth 0738 29536.

Are you better than Kenny Dalglish? If so why not try our great new PBM, Soccer Leagues. English and Italian teams. Send SAE for free starter pack. Paul Barrett, 26 Spring Bank Croft, Parkhead, Holmfirth, Huddersfield HD7 1LW.

AA READER ADS

ORDER SEND TO: SMALL ADS, AMSTRAD ACTION, 30 MONMOUTH STREET, BATH, AVON BA1 2BW

Please place the following advertisement in the next available issue of *Amstrad Action*

Name

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FREE READER ADS!
It's true – you can advertise in Amstrad Action for NOTHING! It's all part of our continuing efforts to provide you with the best value magazine possible.

Classification. Tick box: ❑ For Sale ❑ Wanted ❑ Services ❑ User Groups ❑ Other

Write your advertisement here, one word per box. Include your name and phone number if you want them printed.

Further reading

When you've finished reading AA you don't have to wait a month for more CPC literature. David Crookes browses through the fanzine scene to see what's on offer.

News

● *Potential Difference* (47 All Saints Drive, North Wootton, Kings Lynn, Norfolk, PE30 3RX) is now offering its readers a coverdisc. It works in the same way as all of the other coverdiscs around; you have to send a disc to get the stuff. Basically. It contains the normal coverdisc-type of software (ie, PD) but its major innovation is the menu system it uses – an Amiga Workbench clone. Editor, Chris Goodswen is promising a huge coverdisc for issue six which is, incidentally, its birthday issue.

● Moving on to yet another breakthrough in cover-mounted goodies is *CPC Undercover*. Having teamed up with Sleepwalker PDS, it can now offer cassette users a covertape as an all-inclusive offer with the fanzine for £2. All orders for this should be sent to Sleepwalker PDS, the address for which can be found lurking around the Amscene Directory.

● Sleepwalker PDS (a library which seems to be ever-growing) has been striking a few deals with fanzine editors. Joe Moulding, its owner, has got permission to sell copies of *Artificial Intelligence* and *CPC Power*. Who knows, Sleepwalker PDS could soon become a major distributor of Amstrad fanzines as well as a PD library.

CPC Express

REVIEW

Price: £1.50 + disc + SAE
Editor: SA Sandhu
Address: 17 Cromer Road, London, SW17 9JN



Why flies? Don't ask us?

If you don't believe in reincarnation then you will after reading this. Not in the sense of people coming back to life, you understand, but a magazine concept. You see, in August 1992 there was a magazine called *Amstrad Express* which came complete with a covertape. But because the editor, Salman, had other commitments (exams) the magazine took an early bath (and got rather soggy). Fortunately Salman has decided to revive the 'zine, albeit with a different name.

CPC Express is a 28-page 'zine filled with news, reviews, an article on tape-to-disc transfers, a PD library guide, letters, addresses, technical pages and quite a few adverts. In short, it's got the lot. Well, not quite all. What it hasn't got yet, unfortunately, is a logical way of numbering its pages. If you turn to the last page you will find that you are reading pages 3 and 20!?

The articles are written in a clear and interesting style which is easy to follow. What I found a little bit naughty, though, was that the editor has decided to snatch a few sentences from other magazines, namely *Artificial Intelligence* and *Amstrad Action*. Come on Salman, at least give the original writers some credit.

In terms of design it's a decent enough looking 'zine, though it's an almost direct copy (again) of *Artificial Intelligence* (but imitation is the sincerest form of flattery, as they say, and if you are going to imitate another fanzine then *Artificial Intelligence* is a good target). Unlike some other fanzines, finding articles is not like searching the local computer shop for CPC software as the layout is clear and uncluttered with a decent percentage of appropriately used clip art.

This is the first issue of the 'zine in its current guise and so it is still in an experimental period. There are some problems, but it's quite a satisfying read.

Content: 58%
Appearance: 72%
Overall: 70%

Krash

REVIEW

Price: £1.50
Editor: Karl White
Address: Bryn Trefor, Llandecwyn, Gwynedd LL47 6YR

This is one of the most professionally produced CPC fanzines available. Karl has decided not to produce it on the CPC and even though it is not keeping in with the 'spirit' of the CPC scene, it does admittedly make for a better product in terms of design.

But all graphics and no words maketh not a good fanzine, as the saying goes. If this is true then *Krash* has almost *Krashed* out. Okay, so it does have words – it's not a picture book – but it doesn't have that many of them. The text is written in a large font which limits the reviews to, on average, 100 words. Krash's saving point is that it reads well even if the adverts tend to get in the way of any real content.



For a new magazine with just one writer, though, it is not a bad start. As an added bonus, Karl has slashed the price of issue one to just £1 and says that any *Amstrad Action* readers who order the first two issues can have both for 50p each. A bit of a barg, really.

Content: 40%
Appearance: 90%
Overall: 54%

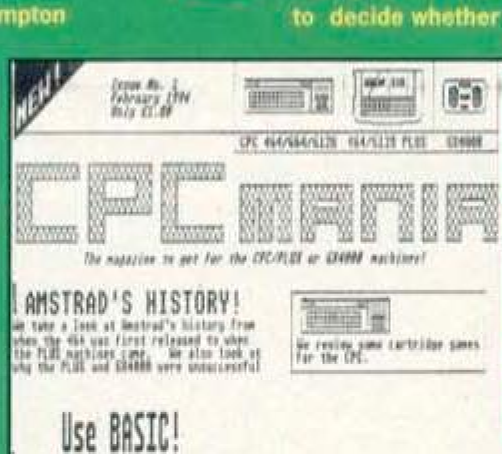
CPC Mania

REVIEW

Price: £1 (cheques payable to Alan Payne)
Editor: Derek Payne
Address: 89 Wolverhampton Road, Codsall, Wolverhampton, West Midlands WV8 1PL

Derek Payne is not new to the CPC scene by all means but this is his first foray into fanzine publishing. *CPC Mania* is an A4 'zine with 28 pages which appear to have been designed on a word processor.

Inside you'll find the usual news, reviews and cheats, as well as an article on the history of the CPC. The major flaw of the the 'zine is the actual content of the reviews; four lines, no matter how beautifully written, do not give the reader a solid base from which to decide whether or not to spend their money on the game.



That aside, though, it's a formidable magazine. Its appearance needs sprucing up a bit, but the text is pretty good and very entertaining.

A lot of the things in the 'zine have been covered by other 'zines before, but if you you want to read them again but written from a new angle, then you could do worse than take a squizz at *CPC Mania*.

Content: 64%
Appearance: 40%
Overall: 60%

The Puzzle Maze



"Welcome, my friends, to the Puzzle Maze. I am your host Ollie O'Brain, here to subject a set of victims (Simon and Dave) to all manner of devilish CPC puzzle games. Will they make it to the Puzzle Dome and play the ultimate puzzle game? Only mumsy knows..."

Scene one: presenter, looking more like a genetic teddy-boy throwback than a television presenter, leaps onto futuristic-looking stage, landing in front of two timid-looking contestants. "I wrote the *Rocky Horror Picture Show*, you know", he mumbles, before leaping into life. "For those of you who haven't seen this show before, it's very simple. We take our two contestants around several zones, each containing a number of rooms. Our team picks a member to be shut into the room, where they'll find a rather natty piece of equipment called an Amstrad CPC. On each computer, there'll be a puzzle game running, on which they'll have to complete one level. If they fail, they'll be locked in. If they win, however, they'll win crystals, which will buy them valuable time later on."

"Unfortunately, owing to a total lack of cash, commitment, or care on the part of the producers of this show, we only have a team of, erm, two. They'd better not get too many wrong, or this is going to be a very short show," the jovial presenter beams, before leading the two contestants out of shot by the elbows. "Right, into the first zone, hurry along, chop, chop, oh dear, where do we get them..."

Tetris (PD)

After a tight little musical sting our presenter, accompanied by the team, strolls into the main corridor of the first game area – the Classic Zone. All around is classy furniture, PD catalogues spread artistically over the polished tabletops from their fingers.

Ollie bounds over to the nearest one and picks up the catalogue, quickly scanning the page.

"*Tetris, Tetris 2000, Super Tetris, Mega Tetris, Power Tetris, Hyper Tetris, Wetris, Temptris, Schmetris* and *Draughts*. This is the place all right – home to one of the most famously classic games of all time. Who wants to take the first crack at this one?"

Dave, sensing his other team member's oncoming editorial revolt, shoves Simon roughly through the hatchway. Simon is just about to complain when Ollie lets the door creak shut.



Power Tetris – a novel twist for the CPC Tetris world.



Tetris can take many different forms...



A prize for guessing the name of this one. (Hint – not Monotris)

Before the timer has even started, Simon is playing away. For the benefit of anyone who hasn't been anywhere near the planet Earth for the past few years, Simon starts to explain the idea of *Tetris* over his shoulder.

"It all started with some Russian bloke wanting to write a computer game, but being restricted by the entertainment technology available in the country at the time. Instead of relying on fast moving high resolution video images and a gun, he had to write something that even the most basic of computers could run. He came up with *Tetris*."

"The idea was really simple – a series of randomly-selected shapes fall down the screen, and all you have to do is move the shape left or right or rotate it to try and fit it into the best available gap. When you completely fill a horizontal line with blocks it'll vanish, and all the blocks above will fall to fill its place – if the pile of shapes reaches the top of the screen, you see, you're dead."

After a few minutes of cursing at himself for his lack of planning, foresight, and basic ability, he emerged from the room to collect his crystal.

Ollie comes to the most important point. "So what would you give it, then?"

"Well it's a classic – there aren't many games that achieve this kind of acclaim. It's gameplay in its rawest form, without interruptions from graphics or sonics. It's a game, the object of which is to have fun. It's classic"

Rating:

Battleships (Domark)

"Onto the next puzzle challenge, then," Ollie booms, leading them to the next doorway, as Simon makes a conscious effort to keep Dave between him and the door. "This one is an intelligence test – who's going to give it a try?"

"He's clever," says Simon, taking a step back. Ollie, needing no further prompting, opens the door for Dave to step through, letting it swing idly shut behind him.

"This is a very simple game that everyone's seen before, called *Battleships*. It's dead simple – you have a grid of ten squares by ten squares, onto which you have to place a set of battleships. Each player (or the computer) takes it in turn to fire at a location on their opponent's grid. The only indication they'll then receive is whether their shot was a hit, miss, or was the last section of an already destroyed ship, meaning a sink. And so the object of the game is to wipe out your opponent's entire fleet before they get yours."

After a minute of wrestling with an on-screen representation of a piece of plastic, Dave emerges from the room, looking slightly let-down. "It's okay, but why did they bother?" he asks, with all the confidence of someone who's reviewed several similar games several times before, "Why not just play it with paper and pen? Putting it onto computer really doesn't seem to be all that productive a way to spend your time – if you really desperately want to play *Battleships* to badly you need a computer opponent, you must be pretty sad anyway."

"But then what would bored PD programmers do with their time?" replies Ollie, limbering up for

the jog to the next zone. "We'll be right back folks, after these adverts."

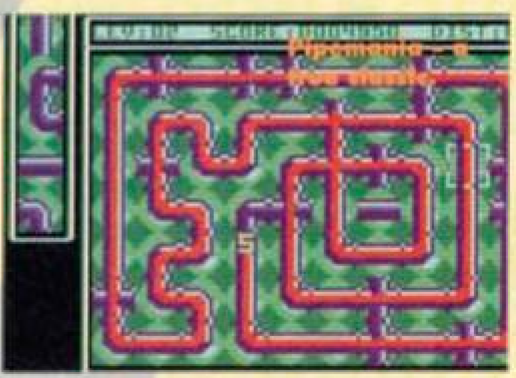
Rating: 2/5

Pipemania (Touchdown)

"Yes folks, it's time for those games with the tightest time limits you've ever seen, making you worry about two things – running short of time as well as trying to work out what the hell you're supposed to do." Ollie bounds onto the set of the second zone, flicking an egg timer on the wall nearby. "Quickly now, who's going to have a try for your third crystal?"

"I may as well do all the work as usual," mumbles Dave as he shuffles to the door that Ollie's happily tapping out a rhythm on. "What's this one, then?" asks Dave.

"*Pipemania* – you have to take tiles from the conveyor belt and drop them onto the grid. Each tile will have a picture of a piece of pipe on it, and all you have to do is make as long a section of complete pipe as possible, to contain the gunge that starts travelling down the pipe a few seconds after you've started building it," chirps our presenter, managing to lean towards both team members and the camera in a ridiculously overbearing manner.


Pipemania – a true classic

Dave steps through the door and sits down, picking up the joystick in a superior manner. "Call this a joystick? How am I supposed to use this?"

Ollie is just about to give a reply roughly along the lines of, "quickly!" when he's shouldered out of the way by Simon, who immediately starts shouting gabbled instructions at the top of his voice.

"Press fire to start it. That's right. Now grab that piece over there. No – the one on the left. Oh, you idiot. No, don't put it there. What are you doing?" Dave is obviously ignoring this unprompted and unwelcome attempt at instruction, an action which only serves to make Simon shout all the louder, "You've messed that right up, Dave. Now what are you going to do? Oh, you jammy sod – that was so close. And that. You're just lucky, that's all."

The end of the level is punctuated more by Simon's silence than it is by the CPC's squeaks and bleeps. Dave, triumphant, steps out of the opening door, taking another crystal from Ollie.

"That was a gem of game," says Dave, sounding at peace with the world. "The time limit being liquid ooze is a nice twist and the fact that you can see the next five pieces you'll be given coming along the conveyor belt lets you plan ahead, even though they're random enough to keep you on your toes."

"It was fun, wasn't it. You might like to know that there's a PD version available that's every bit as good as the original, at a fraction of the price," smooches Ollie, displaying a surprising knowledge of the CPC scene. "We'd better get on though, as we've got to fit another game in this zone in before the ad break." Ollie sprints over to a door on the far side of the scenery.



Rating: 4/5

Puzznic (Hit Squad)

"Oh wow – it's *Puzznic*." Simon is clearly happy.

Dave, looking through the hatch, decides to explain for the benefit of the studio audience: "It's a lovely little game, this. Each level has a set of variously-patterned blocks; when you push two tiles with same design next to each other, both disappear. The blocks can sit on top of one another or on platforms, and you can push them about with your cursor. In fact, the only thing you can't do is lift the blocks – you can only slide them sideways, or let them fall off the end of platforms."

Simon takes offence, "I don't need instructions Dave. I've played this billions of times before."

"20 seconds gone," Ollie isn't in the least bit worried about the time limit, he just thinks he ought to announce the time occasionally.

"Just don't stand there telling me what I already know. You always do that."

"30 seconds,"

Simon rushes over to the table and starts playing, relying on his intellect and cunning to get him through. As you could have guessed, his intellect and cunning fail him miserably, and he barely completes one match before the timer

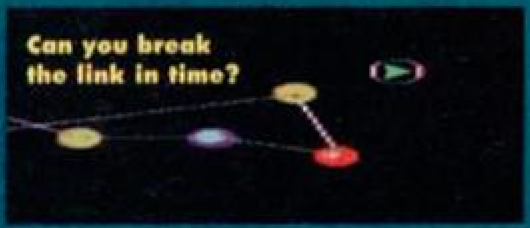
The games they missed

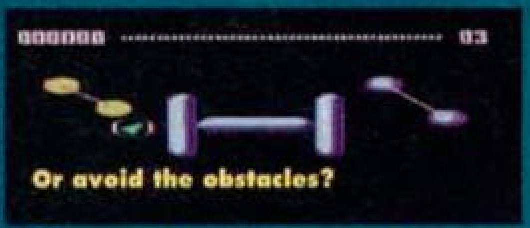
After his untimely lock in, Simon had started to get friendly with one of the studio hands, who gave him a little guided tour of some of the games they'd missed.

E-Motion

A truly odd little game, this one, but we've all seen it before. You start each level with a ship (or two if you've got two players), and a load of different coloured balls. In a style similar to plotting, you have to collide identically coloured balls together by knocking them around with your ship. Be warned, though – if balls of a different colour clash, they'll produce lots of little baby balls.


Classic ball-crunching fun.


Can you break the link in time?


Or avoid the obstacles?

There's a time limit to each level, being the time it takes for the atoms (it's a physics game, you see) to reach critical mass and explode.

Rating: 3/5

Lemmings

Yup, it's the game that everybody loved. Everybody loved it. They loved it right up until they found out it was so bugged it was pretty much unplayable, as some levels would crash, others would hang up, and others had design flaws that meant they were totally unbeatable.

It was a fun game, though – a hatch would open in the sky, and 50 or so lemmings would all jump out. It was your job to get each lemming to do something useful, such as climbing, bridge building, digging, exploding, or anything else that'd help the other lemmings reach the exit safely. The game was perfectly suited to other mouse-driven formats, and though the CPC version meant suffering with a joystick, it was still an utterly fab little game.

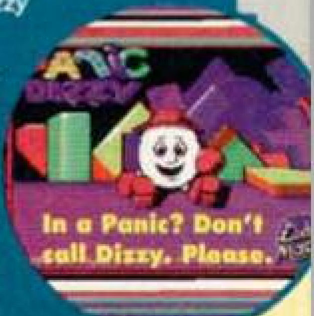
Rating: 4/5

Panic Dizzy

We always slag off *Dizzy* when we can, don't we? There's a reason for this, if you must know – most *Dizzy* stuff is utterly and completely crap. *Panic Dizzy* is no exception, being a truly vile little puzzle game, involving a conveyor belt with different-shaped holes and falling blocks. All you have to do is move the belt left and right, trying to catch the shapes in the correctly shaped holes.


Panic Dizzy – nob, really nob, or abysmally nob? You decide.

That's it. The fact that *Dizzy* just happens to be standing elsewhere on the screen has absolutely nothing to do with the gameplay, and he was obviously just used to sell what was otherwise a bland, irritating and shallow little game.


In a Panic? Don't call Dizzy. Please.

Rating: 1/5

Spitting Image

Released aeons ago (in computer game terms, at least), this was just a simple variation on the standard slidy tile game, except for the fact that it had nice huge pictures of well known political figures to shift around as opposed to squares with numbers drawn onto them. As the name may suggest, the pictures were artwork versions of the *Spitting Image* puppets. What more can I say? It's just a slidy puzzle game. Yep, that tedious.

Rating: 2/5

runs out. Ollie, with the joy of anyone who gets to be in charge of Locking People Up, slams the bolt on the door firmly home, and tuts loudly.

"It wasn't my fault. The joystick was faulty. The CPC wasn't working properly. You were putting me off by telling me what to do." Simon gets desperate for a plausible excuse.

"You should have just got on with it, shouldn't you? It's a great little game, with a reasonable time limit and loads of fun levels, but you just stood there arguing, instead of trying to get used to the way of thinking you'll need to get through the game." Had Dave thought this over, he



It's 'sell that game with a bimbo' time.

wouldn't be saying something like this, but he didn't really see what damage Simon could do from the other side of a wall, be it only chipboard.

"Do you want to buy him back out? It'll cost you a crystal. Actually, it'll cost you nearer two – there's a lot of him, you know." Ollie then starts making exaggerated weighing-up motions.

"Leave him in there – it was his own fault," says Dave, resolutely shaking his head.

"Very well," Ollie declares, producing a mouth organ and hammering out some nameless blues tune. "Onto the next zone, then – the action zone."

And we fade to black again, hearing this time the muffled unprintable cursing of Simon throwing himself around a small wooden room.

Rating:

The Puzzle Dome



"And so," purrs the Puzzle Maze's presenter, "We come to the final game, the Puzzle Dome, the greatest challenge of all – a real corker. Shame all our contestants have been locked in, I'll just have to play it myself." Ollie clambers into the great crystalline structure and the door closes behind him, pushed ably by a flabby studio hand.

Klax
(Tengen)

As soon as he turns the machine on, the Klax title screen appears. That's the beauty of cart game, he reflects quietly, until he realises that the TV audience are still with him. "This is a great game – you have to catch the coloured squares in your bucket as they fall off a conveyor belt, and then deposit them in a grid in an attempt to make lines of three or more, vertically, horizontally or diagonally. Horizontal lines of three score just a few points, while diagonal lines of four or five are much more lucrative.



'We've had the cart insured, you know.'



Yep.

I can feel the excitement building.

"There are 99 levels, on each of which there is a specific target to achieve; sometimes you just need to get a certain amount of Klaxes (rows of three), while at other times you need to score a specific amount of points. The worst, though, require you to get, say 13 diagonal or 18 horizontals. It also gets very fast as the levels progress and starts throwing new colours in your direction.

"It's so great, in fact, that the prize for completing the Puzzle Maze is an unlimited session on *Klax*. This is the puzzle game against which we rate every other one – it's fast, challenging and fun, but it still needs a heavy amount of brain power and reasoning on the later levels. This isn't just a game – this is THE game"

Rating:

Plotting
(Ocean)

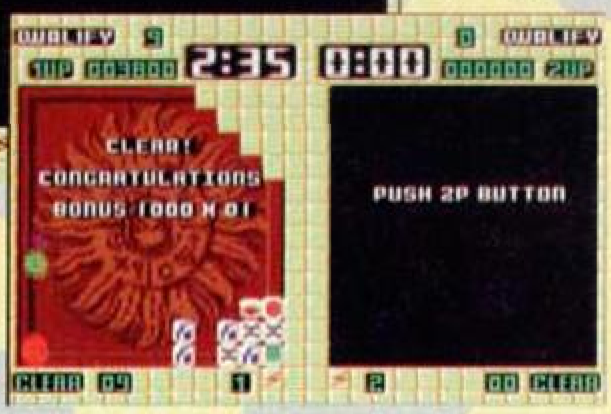


It's *Plotting* – one of the best puzzlers ever!

As the final ad fades from the screen we see Ollie and Dave running into the final zone, trying to make out that while the viewers were considering changing their washing powder and resolving once more to buy the single of the latest Levi's ad, the hapless contestants been jumping around platforms and corridors in an attempt to get to the next level.

"Here we are at the last zone, the Action Zone, Mumsy, Mumsy, Mumsy." Ollie is obviously getting into the part. "The first game is *Plotting*."

"I like *Plotting*, me," Dave had found something he likes. He peered through the viewing portal, "Right, see that block of tiles there on the right. Well you throw other tiles from the left and try to hit a tile in the pile that's got the same pattern. If you do, then both of 'em vanish and another tile flies out of the pile, which is the next one you have to chuck back into..."



"Hold on, take a breath." Ollie looks bemused. "I didn't understand a word of that."

"Er, it's a tricky one to explain. Perhaps, I'd better just polish this one off, " says Dave.

Ollie walks over to the door, types in a code, and watches the door slide gracefully open.

Dave, stepping through the door, tries to ignore the machinery that, though opened the door so smoothly, was refusing to shut it again. Walking over to the CPC, his face noticeably drops. "You've put it on a high level."

"So? Is that a problem?" Ollie gets excited – so far, this was the first game that might be difficult.

"It's just that *Plotting*'s the kind of game you've got to make sure you've got the hang of before jumping in at a really high level – it's best to work your way up gradually," whinges Dave while he wrestles with the joystick, and utterly fails to complete a level.



"Lock-in, then, I'm afraid." Ollie leaps in delight – he doesn't have to worry about the Crystal Dome any more, if there's no-one left to complete it. "You could buy your team out, but not only are you locked in, but you wouldn't have any time in the Dome," he tuts, "your luck's out, mate – puzzle your way out of that."

Rating:

Public Image

Psst. Wanna buy some software going cheap? Some of it's going for the price of a disc and a stamp. Some less than that. All completely kosher, you understand. Y'do? Then Keith Woods has got the dirt on the latest and hottest PD merchandise.

Troll

By Noel Berthereau

Oh no! Poor little Troll has gone and gotten himself lost in the big nasty forest, and if he doesn't find his way home soon, he'll be late for his tea! Worse still, he's in danger of being gobbled up by one of the vicious animals that lurks among the trees. Can you help him?

Well, maybe you can. If you can move Troll around the *PacMan*-like screen to collect nine magic potions, whilst avoiding the nasty monsters, you'll be rewarded with a key which'll allow Troll to escape through a door at the centre of the screen.

The trouble is though, Troll's gone and gotten himself so well and truly lost that you'll need to repeat this feat 10 times. This doesn't bode well for Troll's chances of reaching home, as you'll soon discover that it's really difficult to manage to get past even the second screen.

This immediate level of difficulty is a real shame, because with its cute and colourful sprites and straightforward gameplay, *Troll* is clearly a game which would only be of interest to young 'uns. Despite its initial 'cute' appeal, *Troll* is likely to leave them bored and frustrated.





Troll is one for the kids. Easily pleased kids, at that.

50%

Atland Preview

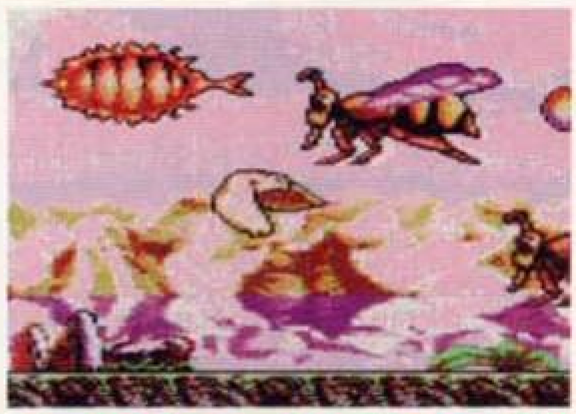
By M Fauquet

The radiation disaster at THORP, which was 10 times worse than that of Chernobyl, had catastrophic results. The most contaminated areas were no longer fit for humans to live in (*a bit like Staines then – Dave*). Only grossly mutated insects, a hundred times their normal size, and creatures the like of which had never been seen on Earth before inhabited the land. If only the British government had listened to Greenpeace...

Environmental politics aside, *Atland* places you in the role of a bird which has gained some rather strange fighting abilities (it must have been the fallout) and has to shoot down and kill all manner of mutated nasties, whilst trying to avoid bubbles emanating from the Earth's contaminated crust.

To help him on his way there's a variety of different weapons for him to collect. He's also remarkably mobile in the air and can never die – as this is only a demo, you never lose a life. It also means, though, that the game soon gets boring, as there's very little to it and it's extremely repetitive – the chance of getting killed might have added a much-needed edge.

The little you do get, however, is extremely good. The scrolling is fast and reasonably smooth, and the graphics and sound are excellent. Most striking though, is the absolutely



Atland – as far as we know the commercial version of this was never released



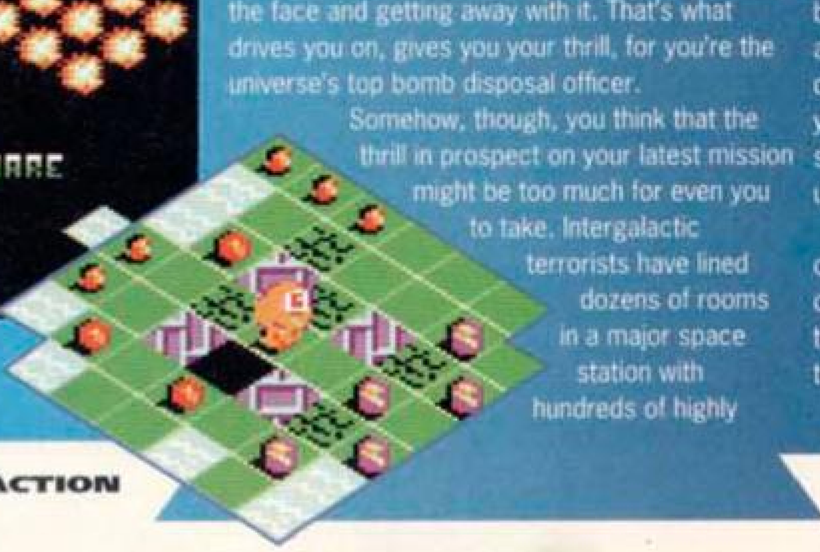
I've heard of crazy paving but this is just getting downright ridiculous.

Bombuz 3D

By Claude Le Moullec of LMC Software

Danger – that's what it's all about. Staring death in the face and getting away with it. That's what drives you on, gives you your thrill, for you're the universe's top bomb disposal officer.

Somehow, though, you think that the thrill in prospect on your latest mission might be too much for even you to take. Intergalactic terrorists have lined dozens of rooms in a major space station with hundreds of highly explosive bombs, and you've been called in to clear them out. Lucky you.



With your heart in your mouth you enter the first room. There's little left of it but tiles and bombs. The walls have been destroyed, and there are major gaps in the floor, so you'll need to be careful to keep your feet firmly on the ground, lest you fall into the eternal abyss of space. With slippery ice patches and tiles that crunch underfoot, you know this is not going to be easy.

The bombs come in three varieties. There are ones that just destroy the tile you're standing on; ones that destroy four tiles more directly beside them as well; and purple ones that destroy every tile surrounding them, which are a real pain.

You've got to prime the bombs, and in three

Robots versus deadly dandelions (we think).



Caecilia Metella

By Joe Moulding of Sleepwalker PDS

PD librarians usually just copy other people's work, without ever sitting down to write anything more than disc menus themselves. How refreshing, then, to come across a PD librarian who devotes much of his energies to programming his own software, and indeed, bases his library on his own work.

That librarian is Joe Moulding of Sleepwalker PDS and *Caecilia Metella* is one of the best of the many games he has produced to date.

You're placed in the role of a Robodigger, who's got the unenviable task of searching through 15 spike-ridden tombs in search of some valuable sparks which open the door to the next level. Unfortunately, the tombs are damp and slippery, so as soon as Robodigger gets going, there's no stopping him until he hits a wall door or spike.

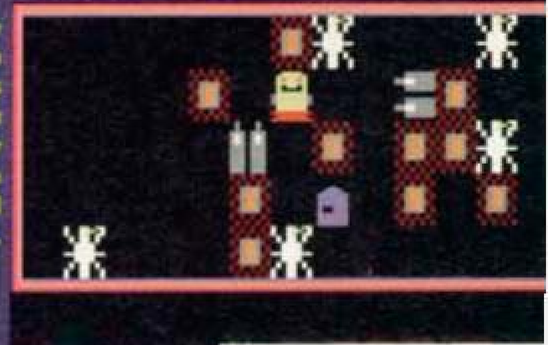
Robo moves around by crashing from wall to wall. When he hits the edge of the small screen he re-emerges on the other side as fast as ever. The idea of this game is to find a way to all the sparks without hitting the sharp side of a spike, heading off in a direction which is free from anything that might bring you to a halt or falling foul of the tight time limit.

It's one of the better ideas I've seen for a puzzle game lately, and boy have I seen a lot! Pity, then, that there are only 15 levels, but the ones we've got are cunningly designed and sure to keep you occupied for a reasonable while.

The graphics are perfectly functional, if a little bland, and there's a decent *Soundtracker* tune tracking along in the background to keep your ears amused. The playing area is, perhaps, a little too small, though the nature of the game does demand a screen of petite proportions.

The only real grumble is that there's not a enough to it. Maybe Joe will produce an extended XL version...?

76%



The rubbish graphics belie a really quite good game.

amazing animation of the main sprite, the bird. It flies along with its wings flapping with startling realism.

As far as I know, the full version of this game never got released. More's the pity, as if the demo's anything to go by, it would have been a stormer.

70%

Soundhakker 2.0

By The Equalizor

The Equalizor is best known for hacking other people's code. Now he provides a program to help you hack the *Soundtrakker* tunes out of other people's programs.

It works on the basis that most *Soundtrakker* tunes, which dominate European disczines and demos, are often stored in the second 64k of the CPC's memory, and thus survive a software reset. The *Soundhakker* can then hack the music from the extra banks and save it as a stand alone file.

The difficulty is, though, that it is impossible to effect a software reset in 99 per cent of the programs *Soundtrakker* tunes are found in. But if you've got a Multiface or *Hack-It*, no problem, because they can rip the music out of anything (well, almost, let's not get literal about this). So, assuming you can actually get at your tunes you'll be able to use this extremely well programmed utility which comes complete with full instruction (a bonus for PD).

If you own a *Hackit*, the *Soundhakker* may prove very useful, as it can be easily installed in the *Hackit*. But there's one minor drawback; the program is stored on track 40 of your disc. This means when that you want to copy it you have to copy the whole disc instead of just one file, which is a completely pointless irritation.

70%

X-Treme

A Symbiosis production

X-Treme, edited by Hypnomega, is a double-sided disczine from the relatively new Symbiosis crew, which was formed when ace coders Prodatron and Alien left Beng! in last summer after having released their highly acclaimed *Voyage Megademo*.

The presentation and control is similar to that of *Bad Mag*. It's also in overscan, and features a great *Soundtrakker* tune with each article. The main differences lie in the fact that *X-Treme* scrolls text from bottom to top, as opposed to right to left, and it doesn't make nearly as efficient use of the screen as does *Bad Mag*. Neither does it look as nice, or feature as smooth scrolling.

However, a nice touch is the little pictures within the actual body of the text which scroll along with it, which liven things up. You can also choose your articles quicker than in *Bad Mag*, as all you have to do is move a raster bar over the article of your choice, as opposed to flicking through the articles until you reach the one you want.

As for the all-important text, *X-Treme* boasts 25 reasonably long and informative articles (in both German and French), covering most aspects of the CPC scene. There's no digression into non-CPC topics like in *Bad Mag*.

X-Treme is one of the best disczines around, second only to the mighty *Bad Mag* (though it has a long way to go to catch up). And hopefully soon we'll be able to see what *AA*'s very own Richard Fairhurst has produced with his long-awaited *Better Than Life* disczine, the first issue of which is imminent.

78%



Stay in the green and out of the reds you get nothing in this game if you fall through one of those blue squares, either.

short seconds scuttle away to a safe distance before they explode and blow you to kingdom come. The difficulty is that each bomb sets off any other bombs which are within its range, creating some pretty explosive chain reactions. As you're rooted to the spot you're on when the bombs begin to blow, you need to be pretty sure that you're standing in a safe area, and won't be cut off from any unexploded bombs which you need to finish the level. Predictably, the many levels are cleverly designed, becoming steadily more difficult as you progress, to ensure that you must take careful note of the result of setting off any of the bombs.

Control is simple enough, provided you're not one of those people that loathes 3D games. The graphics are colourful and everything moves as well as it needs to, though the sound leaves a lot to be desired.

As for the all-important gameplay, this is one game that sure has it. It's like *Jumpmania* in 3D, combining demanding puzzles with an arcade element, but on a smaller, slower scale. This is definitely one of Claude's better games.

85%

Where to go

So now you want to get hold of all this lovely software. Well, it should all be available from your friendly neighbourhood PD library, and to find out where that is, check out the Amscene Directory on page nine.

MEGABLASTERS

Are you ready for some mega-multi-player mayhem? No, well don't worry, you've got a couple of months to prepare yourself for perhaps the best game ever to come out of Europe. Simon checks out how things are shaping up.



Megablasters from OdieSoft. Will it be as good as we obviously think? Will it? Huh?

Those of you who've ventured outside the world of the 8-bits and into the domain of consoles such as the SNES will have undoubtedly seen or heard of one of the most playable multi-player games ever to be released on cartridge – *Super Bomber Man*. Of course, this was preceded by *Bomber Man* on other formats, but the SNES version was the first to make it really big.

Like most other console games though, the concept of the game owed a hell of a lot to stuff that's been available on the 8-bits for years. We're not here for a history lesson, but just bear in mind that this is a game with serious roots. But now everything's coming full circle, because *Megablasters* is *Super Bomber Man* for the CPC.



There's only one way it can end. One of them dies.

Odiesoft's *Megablasters* has a simple enough game idea – you play the part of a blokey stranded in a series of maze-like levels with only a lorry load of high explosives to protect him. Each level is one screen in size, and features indestructible walls, destructible walls and bad guys. Your aim on each level is to kill everything that moves that isn't you.

The bombs are old-fashioned, black, round, shiney affairs that blow up after a few seconds – you can't control the timing, just as you can't control the effects. When a bomb explodes, the blast shoots across the grid horizontally and vertically taking out everything within range. This is useful for getting about the place as well as killing things; blasting through destructible walls is the only way to get from one side of the screen to the other.



Grab those boots – they could come in handy for making a quick escape from somewhere.

On my level

Like most arcade games these days, *Megablasters* is split into separate worlds, including Rookie, Village, Forest and the like. Each of these worlds contains five normal levels, a secret level and a bonus level. The five normal levels are the screens you'll progress through as a matter of course (unless, of course, you're rubbish at the game and don't progress at all), whereas the bonus levels can only be reached by collecting all five letters of the word 'bonus', one of each being left on each screen.

Don't mention the three that died.



The secret rooms are a little more special, though, as they're accessed by almost unforeseeable actions at any point. Some may be entered by walking into a border wall, while others can be found by walking into enemies (not something you'd normally want to do). Whether hiding rooms this well is such an amazingly 'Good Thing' or not is something we'll have to leave for the final review (ah, I love to make these programmers sweat).

One thing you may not be expecting (it's abnormal for this type of game, really) are the end-of-level guardians which pop up to make life that bit more difficult. These are tackled in much the same way, but visiting the bonus room is handy as you can always stock up on

It might just be me being paranoid but I think those cute things are planning something.



Availability

One of the best things about writing previews is thinking of all those people who're going to have to sit patiently and wait for the commercial release of a game like *Megablasters*. Though the game's author is in Europe, *Megablasters* will be available in Britain. Already, Odiesoft has entered negotiations with Rob Buckley's Radical Software to sell the title in the UK.

There are still a few availability drawbacks to be taken into consideration, though. First, this is a game that will be released only on disc. Okay, I know there are a lot of people out there still slaved to tape drives, but this is a game that really wouldn't be possible any other way – it has to come by disc, mainly because there's so damned much of it.

Secondly, it looks very much as if this could be a 128k only game. From the author's calculations, a 64k version is perfectly possible, but the loss of music and some other game features would make the 64k version vastly inferior. It's a pity, sure, but why shouldn't 6128 owners be able to enjoy the advantages of their CPC's extra abilities, instead of using half of their computer to run something that everybody else could anyway.

As soon as we have final release details we'll let you know (hopefully bringing you a full review at the same time), but for now you'll just have to wait to see exactly what form Megablasters will emerge in.

One thing is for sure, though – this game will definitely take up two discs. The sheer enormity of Megablasters will make it impossible to fit it onto one mere 3-inch disc. Whether 3.5-inch versions will be available or not is something else Odiesoft and Radical may want to look into, but, I wouldn't hold your breath if I were you.

On your marks, get set, blow up!



Ah – something's just sitting there asking to be kaboomed with a bomb.



That little black shiny beauty should do the trick quite nicely, thanks.



And would you credit it? It's left behind a multiple bomb icon type thing.



This, of course, is now the ultimate licence to wreak havoc on the world.

those handy extra abilities before meeting it and getting pounded into the ground on account of having a completely crap blokey.

What special abilities, pray tell?

Didn't I mention them? Here would be a good place to do just that, then. On some occasions, you see, when you take out a wall or fry another bad guy, odd icons will be left behind. These icons come in several different guises and give your blokey some rather special help:

- **Extra bombs** – one bomb at a time is pretty dull, huh? Collecting an extra bomb icon will let you drop two, three, or even more at a time. There are some icons that increase your bombing ability by several, but it's all just really a matter of the luck of the draw.
- **Freeze frame** – this one doesn't really need all that much explanation really, as it simply freezes your potential victims for a short period of time, letting you sneak right up to them unawares and plant bombs at their feet.
- **Invincibility** – I'm sure you can all work this one out. Picking up an invincibility icon makes you invincible. You become invincible when you pick up the invincibility icon. Get the idea?



Do computer games breed a violent nation?

Now the wait...

It's over – if you want to learn more about this exciting new release you'll have to wait until we give you the full review. For the utterly impatient I'll quite happily reveal that this shouldn't be anything more than 2-3 months, as the version we've seen looks almost finished.

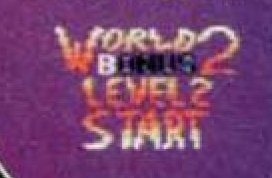
'Til then, for more details contact Radical Software at 57 Lebrun Square, Kidbrooke, London SE3 9NS ☎ 081 856 8402.

- **Longer flame** – when you begin, your explosion's range really isn't particularly impressive. You can collect icons that increase the length of the flame, giving your bombs the ability to fry things a hell of a long way off.
- **Remote detonation** – in some cases, the fact the bombs are on a timer can be limiting. Picking up a detonator icon allows you to plant several bombs and set them off by remote control at your own intervals, making traps and set-ups quite possible.
- **Speed** – there are times in the game when you can't run fast enough – many a badly planted bomb with a long range can have you running for your life, and finding some good running shoes lying around can only be good for your health.
- **The trots** – okay, so this 'special ability' might not be all that helpful, but it's still there. As a deterrent against mindlessly picking up icons, there is a rather cunning little power-up that literally gives your player diarrhoea, making him drop bombs constantly, leaving you running from a line of bombs following you down every dead end, waiting to explode and take your hide with them.
- **Constipation** – the opposite icon to the trots completely stops you from dropping bombs for a limited time period.

Four Play

As if cunningly timed with a similarly slanted feature in this month's ish, *Megablasters* has, incredibly, a four-player mode. Though we'll have to wait and see how well it's implemented, our preview version looks really very strong indeed. The idea behind the four-player mode is simple – it's a battle. Okay, so you may all be united in the common cause of completing a level when playing individually, but in battle mode the last man alive is the winner.

This'll be World Two, I suppose.

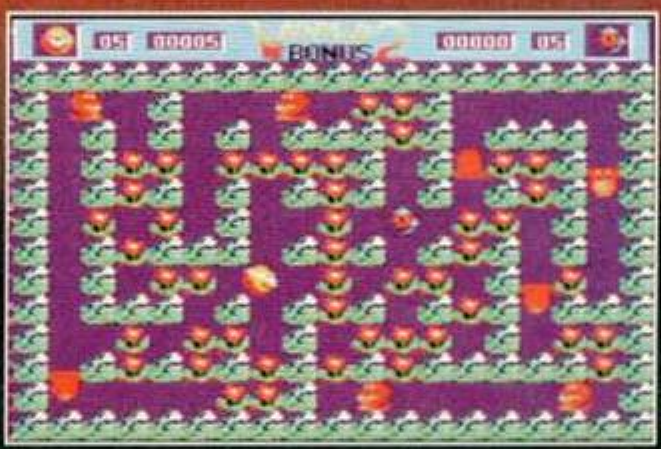


The four-player mode is a feature that really sold *Super Bomberman* on the SNES – though anyone wanting to make use of the facility had to buy extra joypads and special four-way adaptors, the game worked well enough to make the £100-odd for the set-up sound attractive.

The CPC version requires no such add-ons – we've had things like keyboards for years now. Four players can easily manage on a keyboard, given that two of them would be using joysticks anyway. All you'll have to do is plug in and go, leaving those consolers behind in the dust.

I don't really have to explain the good points of multi-player games, do I? If you can't see that intelligent opponents (as opposed to the computer-controlled characters) expand the game so much further, because a fight to the death with intellectual equals (er, interpret that as you will) and a party atmosphere is a truly fabulous thing then you'll just have to wait until the final review comes along to be fully convinced.





If you've got the urge to blow anything up... ...just breathe slowly and think 'I am

CheatMode

Arriving fresh from the outback wastes of Matlock comes this month's feast of mouth-watering pokes put together by the handsome, dashing and charming Lee Rouane (*ah, the real Lee must have been replaced by alien bodysnatchers, then – Ed*).

SPACE ACE COMPILATION

Bit of a biggie this month, cheat fans, so crack them typing fingers and get a load of this cracker from John Girvin for the *Space Ace* compilation (disc version). Each poke has to be merged with the main program – in other words, type in the main listing, save that, then type in the individual game listing you want and merge it with the saved main listing. So come on, get those fingers working, you know you want to ...

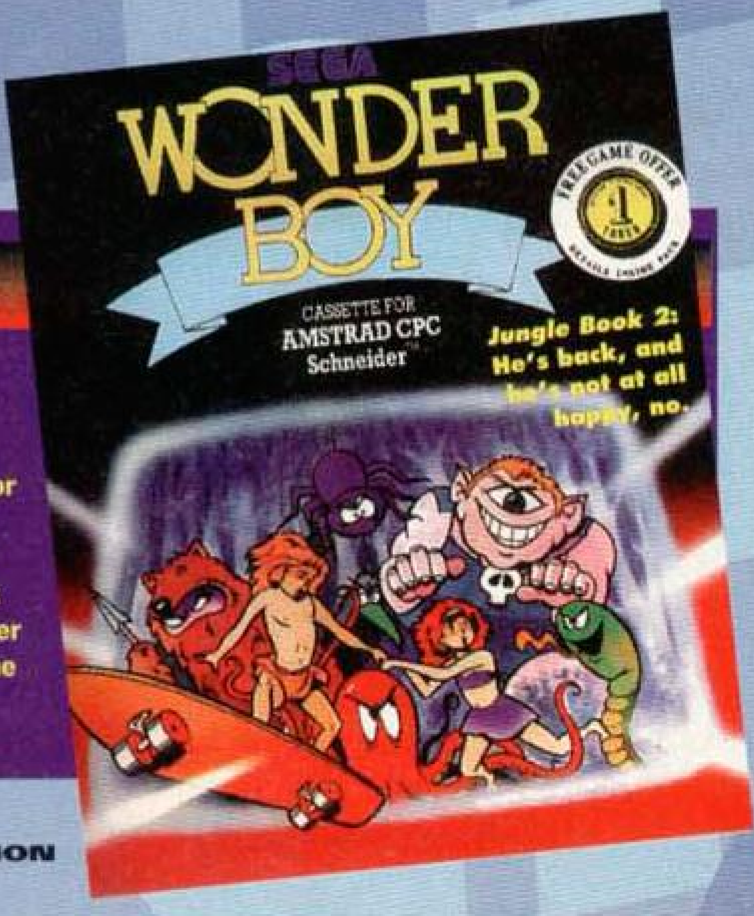
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HAJB  1·'SPACE·ACE·(disq)·hacks
FACH  2·'By·John·Girvin
HALA  3·'For·Amstrad·Action
FAIB  4·'Main·program
AAMH  5·'
FADD  10·|TAPE:OPENOUT"d"
IAJC  20·MEMORY·&5FFF:CLOSEOUT:|DISC
EAMH  30·MODE·1:CALL·&BC02
MANC  40·PRINT·"SPACE·ACE·hacks·by·John·Girvin"
HALI  50·addr=&6000:RESTORE:ln=300
BABM  60·ck=0
IAMK  70·LOCATE·1,3:PRINT·"At·line";ln
EAPE  80·FOR·dat=0·TO·7
DANJ  90·READ·byte$
HAGP  100·IF·byte$="SPACEACE"·THEN·180
GAEE  110·byte=VAL("&"+byte$)
EALG  120·ck=ck+byte
GACO  130·POKE·addr+dat,byte
DANE  140·NEXT·dat
EAEB  150·READ·check$
IABK  160·IF·ck()VAL("&"+check$)·THEN·270
JAOD  170·addr=addr+8:ln=ln+10:GOTO·60
DADJ  180·addr=&631B
DAOM  190·READ·byte$
GACB  200·IF·byte$="**"·THEN·230
HAKG  210·POKE·addr,VAL("&"+byte$)
GAAL  220·addr=addr+1:GOTO·190
EAJA  230·PRINT:PRINT
PAGC  240·PRINT·"Insert·SPACE·ACE·disq·and·pre
      ss·a·key:"
IAHA  250·READ·side:POKE·&BE80,side
FAJG  260·CALL·&BB18:CALL·&6000
NADP  270·PRINT"DtA#·eRR$#8irrrir·TaaA'T·LILyn
      NEe";ln
BABJ  280·END
GAGN  290·'***·LEAVE·ALL·LINES·IN·***
HALL  300·DATA·21,f8,62,06,08,11,8e,99,2c1
JAID  310·DATA·d5,cd,77,bc,e1,cd,83,bc,5c2
IAHM  320·DATA·cd,7a,bc,21,21,60,0e,ff,3b2
IACE  330·DATA·c3,16,bd,a4,48,4c,46,07,31b
HAGA  340·DATA·90,21,80,00,11,00,00,22,164
IALA  350·DATA·34,00,ed,53,36,00,f3,2a,2c7
HAHN  360·DATA·17,bd,22,38,00,01,6d,07,1a3
IAOI  370·DATA·21,b6,99,16,67,af,ed,4f,3d8
IABF  380·DATA·7e,aa,57,77,23,0b,78,b1,34d
IANB  390·DATA·20,f6,01,5d,07,21,c6,99,2fb
IADK  400·DATA·7e,ac,ad,77,23,0b,78,b1,3a5
IAGB  410·DATA·20,f6,01,4d,07,21,d6,99,2fb
HACP  420·DATA·7e,d6,61,0b,77,78,23,b1,383
HACO  430·DATA·20,f6,21,e3,99,01,40,07,2fb
HAMN  440·DATA·0b,78,34,23,b1,20,f9,01,2a5
HAMN  450·DATA·2d,07,21,22,a1,16,5b,7e,207
IAJE  460·DATA·aa,57,77,2b,0b,78,b1,20,2f7
IANB  470·DATA·f6,fd,21,87,03,21,13,9a,36c
IACE  480·DATA·11,59,0a,06,02,ed,5f,ab,273
IAEK  490·DATA·aa,ae,77,23,05,20,f6,fd,40a
IAEN  500·DATA·2b,13,fd,7c,fd,b5,20,eb,474
HAOK  510·DATA·01,fd,06,21,26,9a,16,55,250
IANE  520·DATA·7e,aa,57,0b,77,78,23,b1,34d
IAKH  530·DATA·20,f6,d9,21,38,9a,11,eb,3de
JAMA  540·DATA·06,ed,5f,ae,77,1b,7a,b3,3bf
IANA  550·DATA·23,c2,c1,60,31,4d,9a,21,33f
JACB  560·DATA·6a,03,ed,5f,4f,d1,7b,a9,3fd
IAOH  570·DATA·5a,57,d5,c1,2b,7d,b4,c2,465
HAEO  580·DATA·d2,60,21,5d,9a,01,c6,06,317
IACC  590·DATA·7e,2f,77,23,0b,78,b1,20,29b
IAIE  600·DATA·f7,01,b6,06,21,6d,9a,7e,35a
IABE  610·DATA·ac,ad,77,23,0b,78,b1,20,347
IAJB  620·DATA·f6,01,97,06,21,8c,9a,11,2ec
IAEF  630·DATA·a8,61,d9,21,0e,61,d9,ed,438
JAKA  640·DATA·5f,ae,ab,aa,a9,a8,13,77,43d
HAPO  650·DATA·0b,79,23,b0,28,02,d9,e9,343
IAAC  660·DATA·21,9c,9a,01,87,06,ed,5f,331
IAAC  670·DATA·ae,0b,77,78,23,b1,20,f6,392
HAGH  680·DATA·01,74,06,21,22,a1,16,40,1b5
IAGF  690·DATA·7e,aa,57,77,2b,0b,78,b1,355
HAEH  700·DATA·20,f6,01,63,06,21,22,a1,264
IAII  710·DATA·37,7e,de,3d,77,2b,0b,78,2f5
HAON  720·DATA·b1,20,f6,01,48,06,fd,21,334
JAJA  730·DATA·db,9a,21,3b,0c,ed,5f,fd,426
IAPM  740·DATA·ae,00,ac,ad,fd,77,00,0b,386
IAGE  750·DATA·2b,fd,23,78,b1,20,ee,01,383
IADB  760·DATA·36,06,21,22,a1,37,7e,ce,2a3
HAOO  770·DATA·37,77,2b,0b,78,b1,20,f6,323
HABF  780·DATA·21,10,9b,31,86,61,11,13,208
IAFC  790·DATA·06,d9,cd,8d,61,e1,01,08,384
IAAO  800·DATA·00,09,e5,e1,d9,ed,5f,aa,49e
JACA  810·DATA·ae,ab,77,3b,3b,1b,23,eb,36f
IADN  820·DATA·7d,eb,b2,c0,fd,21,ae,61,507
IAIE  830·DATA·11,f8,05,21,2b,9b,ed,5f,341
IAON  840·DATA·ae,fd,ae,05,77,1b,7a,23,38d
IAOA  850·DATA·b3,20,00,28,02,fd,e9,01,2e4
IAHF  860·DATA·e8,05,21,3b,9b,7e,c6,2e,356
HAJL  870·DATA·77,23,0b,78,b1,20,f6,21,305
IAHF  880·DATA·4b,9b,01,d8,05,7e,ed,44,373
HANO  890·DATA·77,23,0b,78,b1,20,f6,01,2e5
IAIF  900·DATA·c7,05,21,5c,9b,37,7e,de,377
HAJO  910·DATA·28,77,23,0b,78,b1,20,f6,30c
IABB  920·DATA·31,21,a1,21,d7,02,ed,5f,339
IABI  930·DATA·4f,d1,7a,a9,53,5f,d5,3b,405
IAAH  940·DATA·3b,2b,7d,b4,c2,f6,61,01,3b1
```

BRUCE LEE

Phillip Entwistle from Astley Tyldesley supplies us with a black belt of a cheat for that old kick-'em-up, *Bruce Lee*. Philip writes that if you run straight onto the third screen and then go to the right-hand corner and lie down, you will skip going underground. Now, when you reach the extra life, collect it and run off the screen and then return back to the extra life. Repeat this method for as many extra lives as you want. AAAAHHHSOOO! (*Bless you – Dave.*)

WONDERBOY

R (Raspberry? Rabbit? Rotund?) Hojabr of Hove in East Sussex supplies his first Cheat Mode contribution – a corking little tip for *Wonderboy*. He suggests that on level one round three, collect the bag of gold and then do not break the egg with the leech in; jump over it instead. You will now find that the bag of gold will have filled your energy meter completely.



Jungle Book 2: He's back, and he's not at all happy, no.

```
IAAH  950·DATA·a2,05,21,81,9b,cb,0e,0b,2c8
HAOO  960·DATA·78,23,b1,20,f8,21,91,9b,3b1
IAME  970·DATA·01,92,05,ed,5f,ae,0b,77,314
IAJE  980·DATA·78,23,b1,20,f6,21,a0,9b,3be
IAMB  990·DATA·01,83,05,7e,2f,77,23,0b,1db
HAEM  1000·DATA·78,b1,20,f7,31,21,a1,21,354
IAKM  1010·DATA·b5,02,ed,5f,4f,d1,7b,a9,447
IAHK  1020·DATA·5a,57,d5,3b,3b,2b,7c,b5,358
HAMJ  1030·DATA·20,f0,01,59,05,21,22,a1,253
IAKE  1040·DATA·16,16,7e,aa,57,77,2b,0b,258
IAMA  1050·DATA·78,b1,20,f6,01,48,05,21,2ae
IAGI  1060·DATA·db,9b,16,13,7e,aa,57,77,395
IAKA  1070·DATA·23,0b,78,b1,20,f6,01,36,2a4
IAOD  1080·DATA·05,21,22,a1,37,7e,de,10,28c
IAEH  1090·DATA·77,2b,0b,78,b1,20,f6,01,2ed
IAEH  1100·DATA·26,05,21,f0,9b,37,7e,ce,35a
IAPD  1110·DATA·0d,77,23,0b,78,b1,20,f6,2f1
IAGE  1120·DATA·31,12,9c,21,88,02,ed,5f,2d6
IAOM  1130·DATA·4f,d1,7a,a9,53,5f,d5,c1,48b
IAHH  1140·DATA·2b,7c,b5,c2,96,62,01,fe,415
IAOA  1150·DATA·04,21,22,a1,37,7e,ce,07,272
IACH  1160·DATA·77,2b,0b,78,b1,20,f6,01,2ed
HAOM  1170·DATA·f2,04,21,31,9c,35,23,0b,247
IACB  1180·DATA·78,b1,20,f9,01,e4,04,21,34c
IAEH  1190·DATA·3f,9c,cb,06,23,0b,78,b1,303
IAND  1200·DATA·20,f8,3a,80,be,b7,21,00,368
HAIH  1210·DATA·63,28,03,21,0d,63,11,16,146
IAAF  1220·DATA·a1,01,0d,00,ed,b0,21,00,26d
IAJA  1230·DATA·00,22,b6,9c,22,c2,9c,21,315
IALB  1240·DATA·1a,63,22,94,9e,c3,40,9c,370
HAPO  1250·DATA·44,49,53,4b,2e,42,49,4e,232
IAEE  1260·DATA·7c,72,a2,1d,41,b5,80,f2,415
IAKH  1270·DATA·0d,a7,0e,25,01,9f,98,3b,25a
IACB  1280·DATA·74,ab,c2,80,06,12,c8,12,353
HACI  1290·DATA·4a,01,00,00,00,00,00,00,04b
EADF  1300·DATA·SPACEACE
```



Were that me, I'd be more worried about the huge purple thing by my foot.

Northstar

This excellent shooter is well and truly poked with infinite lives and invulnerability and John has also managed to get your car to stop skidding after braking for those sharp corners. Merge with the main program above, or type this directly after it.

```
HAAJ  2000·'SPACE·ACE·-·Northstar
EAKG  2010·'***·LEAVE·IN·***
HALA  2020·DATA·21,2d,63,11,40,00,ed,53
HAKJ  2030·DATA·ca,82,01,16,00,ed,b0,c3
DAEB  2040·DATA·00,80
GAHI  2050·'Infinite·lives
FADG  2060·DATA·3e,b4,32,0c,29
HABF  2070·'Invulnerability
FAJG  2080·DATA·3e,18,32,c9,0c
JADH  2090·'No·skids·when·stopping
GABK  2100·DATA·21,00,00,22,71,0d,22,72
CACL  2110·DATA·0d
```



RENEGADE 3

A little snippet here for all those raging *Renegade 3* fans out there. Jonathon Crozier of Bellingham, Northumberland has come to your aid with a neat keypress that should enable you to finish this one in next to no time. He suggests that you should hold down the keys Q and T at the start of the level, then pressing these keys again will transport you to the next level.

I wish I could do that with my leg (are you sure? - Dave).

```
EAMG  2120·'***·LEAVE·IN·***
EAMK  2130·DATA·c3,00,01,**,1
```

Trantor

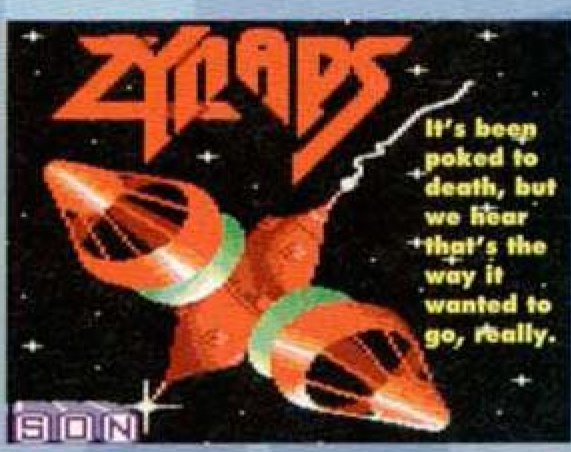
Now to that brilliant platformer, *Trantor*. John has excelled himself once again by revealing the secret of infinite lives. Merge with main program or type directly after.

```
GAFL  2000·'SPACE·ACE·-·Trantor
HAOA  2010·DATA·21,24,63,22,af,82,c3,00
GAON  2020·DATA·80,21,36,63,11,40,00,ed
HAJG  2030·DATA·53,26,aa,01,08,00,ed,b0
HAFI  2040·DATA·c3,24,a9,3e,c9,32,7e,24
FALG  2050·DATA·c3,00,01,c0,**,0
CAGH  2060·DATA·**
```

Zynaps

A very good blast gets even better now with John's helping hand. Leave out the cheats that you don't need. Follow the same instructions as before.

```
GAAF  2000·'SPACE·ACE·-·Zynaps
EAKG  2010·'***·LEAVE·IN·***
HALA  2020·DATA·21,2d,63,11,40,00,ed,53
HAHE  2030·DATA·35,87,01,29,00,ed,b0,c3
EAAK  2040·DATA·00,80,3e,c9
IAOM  2050·'Fire·through·scenery
EADB  2060·DATA·32,bf,48
HABF  2070·'Invulnerability
DAFO  2080·DATA·32,5d,56
GALI  2090·'Infinite·lives
DAJN  2100·DATA·32,4e,60
EABM  2110·'Rapid·fire
DAPK  2120·DATA·32,39,61
EAGG  2130·'No·aliens
```



It's been poked to death, but we hear that's the way it wanted to go, really.

```
HAGH  2140·DATA·af,32,3f,4a,32,44,4a,32
FAMG  2150·DATA·49,4a,32,4e,4a
IAFH  2160·'Fly·through·scenery
FAMG  2170·DATA·3e,a7,32,e2,48
HADP  2180·'Aliens·stop·firing
FACN  2190·DATA·21,37,c9,22,a6,48
EALI  2200·'***·LEAVE·IN·***·
EADL  2210·DATA·c3,00,90,**,1
```



Cybernetics is a science that challenges our concepts of life and poses some difficult moral questions. It's also a great SF plot device.

Cybernoid

Infinite weapons and an unending source of lives are just a couple of the possible options with this poke. So, if you want an unbelievably powerful ship so that you can blast your way through cavern after cavern like a (heavily armed) mad thing, just follow the same instructions as before (y'know, the ones we told you about way back at the start of this mega-cheat), and you can't go far wrong.

```
HAKG  2000·'SPACE·ACE·-·Cybernoid
EAKG  2010·'***·LEAVE·IN·***
HALA  2020·DATA·21,2d,63,11,40,00,ed,53
HAPJ  2030·DATA·fc,86,01,12,00,ed,b0,c3
EAHA  2040·DATA·00,80,af
FANC  2050·'Faster·game
DAGK  2060·DATA·32,41,02
HADG  2070·'Infinite·weapons
EAHA  2080·DATA·32,0d,1a
GALI  2090·'Infinite·lives
EAED  2100·DATA·32,ae,2b
HAME  2110·'Invulnerability
FAAJ  2120·DATA·3e,c9,32,3a,2b
EANG  2130·'***·LEAVE·IN·***
```

Exolon

Infinite lives, bullets, grenades and invulnerability are all provided for this most excellent covertape blaster. Remember, this only works in conjunction with the main listing, as it's another one of our mega-cheats.

```
GAAE  2000·'SPACE·ACE·-·Exolon
EAKG  2010·'***·LEAVE·IN·***
HAOG  2020·DATA·21,2d,63,11,00,be,ed,53
HACN  2030·DATA·8f,8b,01,1d,00,ed,b0,c3
EAHA  2040·DATA·00,80,af
GAHI  2050·'Infinite·lives
DAJN  2060·DATA·32,25,2a
HABG  2070·'Infinite·bullets
DABL  2080·DATA·32,59,11
HABL  2090·'Infinite·grenades
EAJA  2100·DATA·32,7a,1f
HAME  2110·'Invulnerability
GALJ  2120·DATA·32,79,07,32,78,12,32,79
HAEB  2130·DATA·12,32,7a,12,3c,32,8c,07
EAOG  2140·'***·LEAVE·IN·***
EABL  2150·DATA·c3,40,00,**,1
```



Nope. Sorry. What the hell are those multicoloured balls for?

Xevious

Discover the benefits of a long and enduring life now with this Infinite Lives poke. Follow the same instructions as before. In other words if anyone's just flicked through this cheats section, spotted the heading Xevious, thought, "Hmm, I've got that game and I'm useless at it," and is hoping they can just type in these few lines, life ain't that easy. Check out the first few lines under the heading *Space Ace* Compilation.

```
GAOL  2000·'SPACE·ACE·-·Xevious
EAKG  2010·'***·LEAVE·IN·***
HALA  2020·DATA·21,2d,63,11,40,00,ed,53
HAIG  2030·DATA·07,90,01,0c,00,ed,b0,c3
GAPM  2040·DATA·00,80,21,00,00,22,ec,04
HAJA  2050·DATA·22,ed,04,c3,00,01,07,32
GAAM  2060·DATA·78,12,32,79,12,32,7a,12
HADB  2070·DATA·3c,32,8c,07,c3,40,00,32
HALC  2080·DATA·e2,48,21,37,c9,22,a6,48
EAJL  2090·DATA·c3,00,90,**,1
```

Venon Strikes Back

Be a cut above the rest now with this poke for Infinite Energy and Infinite Weapons. Follow the same instructions as before.

```
KAGG  2000·'SPACE·ACE·-·Venom·Strikes·Back
EAKI  2010·'***·LEAVE·IN·***
HALA  2020·DATA·21,2d,63,11,40,00,ed,53
HAOM  2030·DATA·d9,8b,01,1a,00,ed,b0,c3
FAIG  2040·DATA·00,80,af,67,6f
GAOO  2050·'Infinite·energy
GAFO  2060·DATA·32,4b,33,32,28,3a,22,25
FAJM  2070·DATA·42,3e,a7,32,27,42
HAEG  2080·'Infinite·weapons
FAMG  2090·DATA·22,94,31,22,95,31
EAKG  2100·'***·LEAVE·IN·***
EAJK  2110·DATA·c3,00,01,**,0
```

And that just about wraps it up. Phew.

Poking the multiface way

1 Make sure you've got a Multiface plugged into the back of your CPC – it helps.
2 Load the game as normal.
3 Press the RED button on the Multiface.
4 Press 'T' for tool.
5 Press '*' to select the code.
6 Press 'H' for hexadecimal input.
7 Press SPACE for input.
8 Type in the address (ie, 3A7C).
9 Type in the POKE (ie, A7).
10 Press RETURN.
11 If there is more than one poke then go back to step seven.
12 Press ESC to get back to the menu.
13 Press R to return to the game.

Are you befuddled by listings?



Don't panic if you're new to listings. There's a full explanation of how to type in the darned things and what the four-letter codes at the beginning of each line mean in the Type-Ins section which starts on page 28.

CHAMPIONSHIP GOLF

Tee off to success with this excellent tip from William Huddleston of Tweeddale. First, go to the level option – you are presently on easy. Change the level to hard then back to easy again and select menu. When you decide to play the next tournament you will find that the opposition will not play as good as before. Cheers Wills, send us some more and we'll declare you a national hero.

The Manic multipoke mania zone

A special multiface poke extravaganza this month folks with all the pokes from John Girvin's *Space Ace* cheat to give you black box owners a special advantage (and less stumpy fingers). Some of these pokes might work on the original (and covertape) versions of the games. It's worth a try, anyhow. And if you've got any pokes you want to let the world know about send them to Cheat Mode, *Amstrad Action*, 30 Monmouth Street, Bath, Avon BA1 2BW.

Game	Format	Poke, Address	Effect
Trantor	Disc	247E,AF	Infinite lives
Zynaps	Disc	48BF,AF	Fire through scenery
		565D,AF	Invulnerability
		604E,AF	Infinite lives
		6139,AF	Rapid fire
		4A3F,AF 4A44,AF 4A49,AF 4A4E,AF	No aliens (do all four pokes)
		48E2,AF	Fly through scenery
Venom Strikes Back	Disc	334B,AF 3A28,AF 4227,AF	Inf energy (do all three pokes)
		3194,AF 3195,AF	Inf weapons (do both pokes)
Xevious	Disc	03F0,xx	where xx= number of lives

Game	Format	Poke, Address	Effect
Northstar	Disc	290C,B4	Infinite lives
		0CC9,18	Invulnerability
		0D71,AF 0D72,AF	No skids (do both pokes)
Exolon	Disc	2A25,AF	Infinite lives
		1159,AF	Infinite bullets
		4F7A,AF	Infinite grenades
		0779,AF 1278,AF 1279,AF 127A,AF 078C,01	Inf energy (do all five pokes)
Cybernoid	Disc	0241,AF	Faster game
		1A0D,AF	Infinite weapons
		2BAE,AF	Infinite lives
		2B3A,C9	Invulnerability

HELP!

Stuck behind that seemingly impassable rock? Is that guardian on level four giving you hassle? Need a poke we published before you were born? Don't fret – Lee Rouane, IQ 857 (*is that in hex? – Ed*) is here to deal with all your enquiries.

Some months ago I purchased *Prehistorik 2* from Titus. Despite very determined efforts we cannot escape the jungle nor can we inflate the hang glider. Do you know of a cheat mode or can you give us any clues?
Mrs C Taylor, Lipson, Plymouth.

Alas Mrs C, no cheat mode for this graphic stunner has yet become apparent but here are some tips that will take you right out of the jungle and beyond. First collect the hang glider then stand on the edge of the rock you want to jump off. Repeatedly move the joystick to the up position (ie, jump) and the hang glider will start to fill with air. Once airborne, you must continue to move the joystick up otherwise the hang glider will deflate and you will drop (to your doom). To make your way across the jungle floor you will have to bounce off the baddies' heads and jumping on (and then off) any convenient rock outcrop in a left-to-right direction. If you make it across you will have finished the game.

I have been reading *AA* since Issue 64 and I never tire of reading the greatest CPC mag ever published. I am writing because I desperately need cheats for *Ghosts & Goblins* and *Robocop*. I realise you cannot reply direct so can you please print them in the next available *AA*?
John Shields, (a desperate gamesplayer) Rothesay, Isle Of Bute.

Thanks for the sentiments John, but your blatant creeping doesn't win you a prize. Sorry. But you can have these pokes though with compliments from the Cheat Mode vaults.

```
GAMC  1·'·GHOST·&·GOBLINS·(TAPE)
MAOE  2·'·INFINITE·LIVES·&·PRESS·ESC·TO·ADVANC
      E·A·LEVEL
FAJP  3·'·BY·STEPHEN·MATTHEWS
AALJ  4·'·
HAGI  10·MEMORY·&12FF:MODE·0:BORDER·0
JAOC  20·FOR·i=0·TO·15:READ·c:INK·i,c:NEXT
GALN  30·LOAD"!ghostpic.scn"
DAEK  40·LOAD"!code"
JAKK  50·POKE·&828,&0:'·CANNOT·USE·A·MULTIFACE·
DAMJ  60·POKE·&5096,&C8
CAOK  70·CALL·&5000
BAII  100·END
JAMK  110·DATA·26,13,0,15,24,6,16,2,14,1,3,11,
      10,9,18,25
```

```
FABF  1·'Robocop·Cheat
GAJD  2·'Infinite·Energy
FAHG  3·'By·Phil·Howard
AALH  4·'
FALC  10·DATA·21,16,BD,36,C3,23
FABE  20·DATA·36,0E,23,36,BE,C3
FAHF  30·DATA·a5,99,21,17,BE,22
FAIG  40·DATA·4F,A6,C3,08,A6,DD
FAHL  50·DATA·21,b9,a8,11,ab,00
FAFI  60·DATA·CD,48,a8,21,2A,BE
FAKK  70·DATA·22,62,a9,C3,e3,a8
FAML  80·DATA·3E,c9,32,f2,3e,C3
CAEP  90·DATA·66,3f
EAFL  100·y=0:MEMORY·&5000
FAPG  110·FOR·x=&BE00·TO·&BE31
FAKJ  120·READ·a$:a=VAL("&"+a$)
GACH  130·POKE·x,a:y=y+a:NEXT
FADF  140·IF·y<>&1617·THEN·170
EAMA  150·LOAD"ROBOCOP
DAAA  160·CALL·&BE00
GAOI  170·PRINT"data·error!"
```


Spellbound Zacks

Regarding the keypress for *Spellbound Dizzy* in *AA98* – I cannot get it to work! I must be the world record holder for typing IWANTANOMLETTE. I have followed the instructions to the letter but it just won't work. Please help.
J Morriss, Boughton, Notts.

An absolute flood of letters has deluged the Cheat Mode offices this month with over half of them enquiring about this keypress. This keypress works perfectly fine on my upgraded (to 128k with disc) 464 plus, so I am inclined to think that 464 and 64K machine owners cannot, sadly, benefit from this keypress. If anybody knows any different then please write and call me a rambling old fool.

I've heard there is a keyboard cheat for *Exolon*. Could you tell me what it is?
Gerry Kidd, Staines.

For infinite lives you need to redefine the keys as Z, O, R, B, A (which is more printable than some Raf Cecco keyboard cheats).



The Dark Knight returns. In cyan, apparently.

We can't do it, you can help

Each month we get letters from readers at their wits' end asking us all sorts of strange and impossible questions (*in other words, Lee doesn't know the answers – Ed*). Rather than let them down completely, we have decided to let you lot have a go at providing the answers for them. If you think you can answer any of the following questions then write to:
GIVE LEE A HAND,
AMSTRAD ACTION,
FUTURE PUBLISHING,
30 MONMOUTH STREET,
BATH, AVON BA1 2BW.
Who knows, there might just be a prize lurking for the best answer every month.

- **I can't find any bat pieces in the original Batman. Can anyone help?**
  Matthew Fennel, Halewood, Liverpool

- **I need some help with *Rainbow Islands* levels 1-5 (Insect Island). I can't find any of the secret rooms. Can anyone tell me where they are?**
  Anthony Ayres, Baskinagh, Co. Meath

- **I know this sounds silly, but no matter how hard I try I cannot get over the first obstacle in Codemasters' *Moto X*. Please, please can anyone spare me from this nightmare?**
  Jason Ackerman, Thurnby Lodge, Leicester.

- **I have a GX4000 (*you poor thing – Lee*) and two games I desperately need some help with are *Fire & Forget 2* and *Pang*. I'd be very grateful if someone could help me with these games.**
  Simon Topper, Edgbaston, Birmingham.

Dear AA Short Sharp Shocks

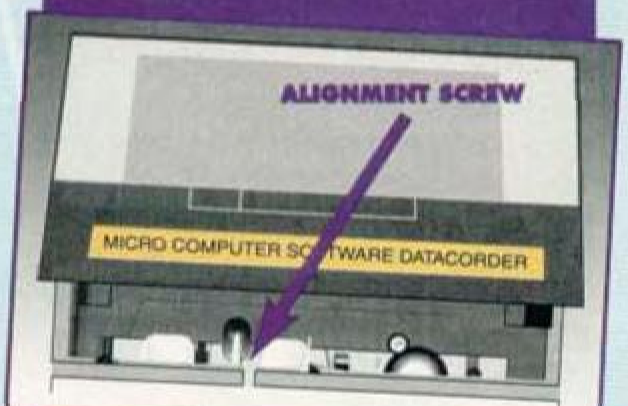
Have you got any intention of running a hardware series giving the types of peripheral available, their specs, and what they can be used for?
Paul Collins, Dorset.

We certainly have. It'll start either next issue or in *AA*107. **Dave**

What happened to Peter Worley (1992). Did he stop writing?
Andrew Hughes, Sheffield.

Peter Worley – where are you? **Dave**

Please print a diagram of a tape player, showing where the alignment screw is?
Eric O'Dell.



Glad to be of service. **Dave**

Please make out a £20 cheque to Eric O'Dell and send it to my address.
Eric O'Dell.

We're not glad to be of that much service. Sorry. **Dave**

What size disc drive do I need for a 464, 3-inch or 3.5-inch?
Sean Gray, Morpeth.

Both work with the CPC, but you'd be better off getting a 3-inch disc drive, because that's what most of the software comes on. The 3.5-inch drives are only really any use if you want to transfer data to or from other computer formats, such as PS. **Dave**

My reply to the Short Sharp Shock in AA102 is, "No, I do not wear an anorak, but I bet Simon wears a pink frilly tutu with net stockings and pink Doc Martens to the pub – and all the workmen having their pints wolf whistle at him."
Daniel Thain, Cowley.

What makes you think that? **Dave**

React

This is your chance to get your views broadcast to the nation, so send your letters to: Reaction, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath BA1 2BW.

Street life

I have suffered your comments about one of my favourite games – *Street Machine* – for some time now. It also annoyed me to a considerable extent that the name appears to have been changed, as you now refer to it as *Street Rally*.

I can assure you that the game is not new. I bought it in early 1987 and I have always known it as *Street Machine*. This is confirmed by another person who contacted your magazine and said he bought the game in Blackpool. Hopefully, I can clear this up once and for all.

The game is a proper release and was written by a company called Software Invasion and I am certain that it is not PD. I am sure that many people have this particular piece of software, as it was readily available for at least a couple of years after 1987.

I would like to add that your opinion of this game is misguided. I can think of 100 worse driving games – *Formula One Simulator*, for example, is nowhere near as addictive or interesting as *Street Machine*.
Mark Newman, Brentwood.
PS Your screenshot in the review of *Street Machine* in the February 1994 issue of *Amstrad Action* is incorrect. In the actual game, the road from the starting line goes straight ahead and then left, not right. Owing to this error I nearly bought another copy of the game from CPC Now! as I thought it was a different game.

Now, just hold on a minute here. Don't blame us for this debacle. We reviewed a game we were sent, *Street Rally*, in good faith, believing it to be a new game – that is how it was presented to us by CPC Now! We were not trying to hoodwink anybody, and as soon as we found out the truth we printed it. If anyone is at fault it's actually CPC Now!, who should be ashamed of trying to pull a stunt like that.

The PD connection comes from the fact that we found a C64 PD game identical to *Street Rally*, except that the instructions were in Italian. The mystery deepens.

As for the grab, it was printed correctly. In *Street Rally* the track *does* go that way. In fact *Street Rally* isn't so much a carbon copy of *Street Machine* as an inferior version of it. Which probably explains why our rating was so low. **Dave**



Street Rally or Street Machine? Will we ever know the truth?

Public service

I just had to write in to tell you my views about a certain PD library, namely Sleepwalker PDS. PRETTY DARNED GOOD!

If other PD libraries work like this one (most I've written to don't), then they won't go far wrong.

Discs return quickly, and I mean quickly, and the catalogue is one of the best I've laid eyes on.

Please print this letter so that Joe Moulding knows that he's got one very satisfied customer here.
Damian Hart, Lincoln.
PS Why have you stopped making the covertapes easily transferable to disc?

I hope Joe's got more than one satisfied customer. Oh yeah, about the tape to disc transfers. Yes, sorry they've been missing lately, but, where possible, we will be including them again in the future. **Dave**

Poster campaign

I want to ask all you budding Amstradees out there to help me and help the collective Amstrad world, in an easy bout of advertising for poor Arnold.

Here's the plan.

What I have done is got hold of several pieces of A3 paper from my art teacher and I drew some posters. On one it said:

"Break into computer programming –

ion

it's an easy way into a good job – with an Amstrad."

Another said:

"Learn to program computers with an Amstrad CPC."

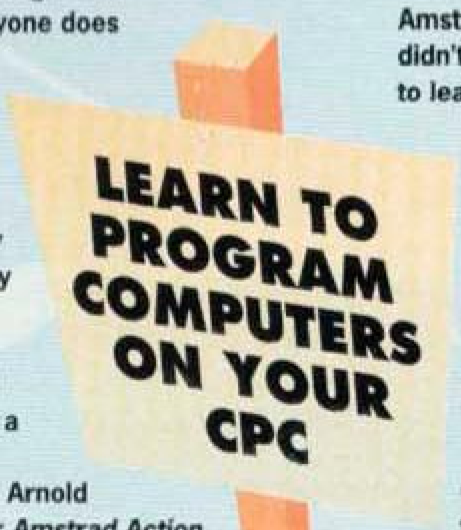
While another said:

"Amstrads combine technical knowledge of all sorts with a games base bigger than any console's."

All three had logos and artwork. If everyone does this then the Amstrad market will retake the ground that the Amiga has evilly and malevolently stolen.

I am at boarding school for nine months a year – a long separation from Arnold – but I still order *Amstrad Action*. Don't let anything stop you! If he sells it to someone else get him to get another! (*Sorry – Dave?*)

I am on holiday now so I can try out the three covertapes that used to shine in my school locker.



Well, it beats, The End is Nigh.

Don't pirate games – if you want a game then buy it. Software shops offer a large selection of second-hand games at 50p each. Oh no, I am just about to run out of...

Lots of business-like luck,
Simon Crabtree, Selby.

Right, we'll give a prize to anyone who can get their Amstrad posters shown on telly. Send us a video tape as proof. Sky One doesn't count (because it's rubbish). **Dave**

Dear AA: Aladdin's cavern

I recently had a very interesting (and enlightening) conversation at my local Computer Cavern store.

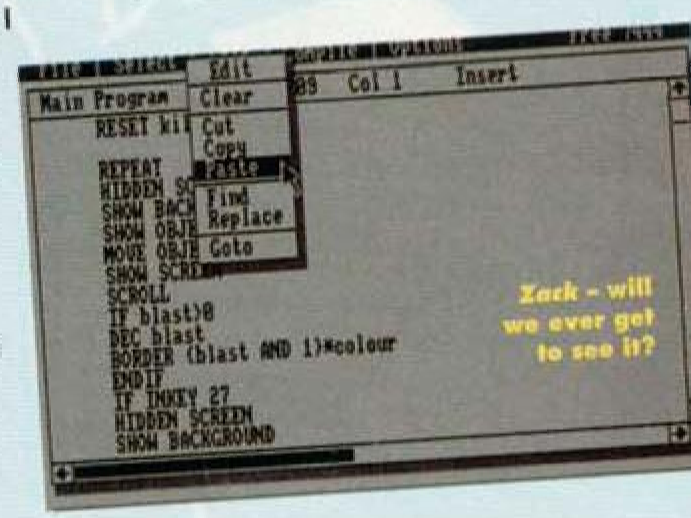
I happened to be browsing around the Amstrad cassettes and discs, but seeing as I didn't have any money on me I was about to leave. *But when I reached the door the* man behind the counter (who had obviously been watching me) called out, "Are you interested in Amstrad games, then? If you can't see what you want we can get it for you."

So I walked back over to the counter where he offered to get me a copy of the stock lists. "Are you interested in discs or cassettes?" Either. "Well, we have hundreds of discs and thousands of cassettes. In fact we have the largest range in the world. If you want anything in particular we can get it for you from Marlow for you to pick up, or you can get it by mail order."

Thanks! In actual fact, glancing down the sheet, they stock more than just discs and cassettes; they do a full range of game carts, printer ribbons, joysticks, headcleaners (disc), dust covers, cables, business utilities, light pens and much, much more. Who said the CPC was dead?

If you're interested (and want to keep the CPC alive – you ought to) contact: Capri Marketing Ltd, Computer Cavern, 9 Dean Street, Marlow, Buckinghamshire SL7 3AA, enclosing an SAE for a list, or ask at your local branch of Computer Cavern for details. It says on the sheet, "Tell all your friends about us," so I have.
Matthew Long, Reading.

We have mentioned the excellent service Computer Cavern gives CPC users before – they supplied us with many of the cart games for a Go Cartin' feature a few months back. If you're looking for any CPC-related products, they're a good place to start. **Dave**



Zack – will we ever get to see it?

Dear AA: I felt stupid

1 I would like to say a big thank you for putting *Blues Brothers* on the covertape – "A BIG thank you". The music is brillimmosso.

2 In answer to your question in 103, *Nebulus* is a cross between a pea and a wacky cabbage.

3 I have now started subscribing to your mag because the local newsagent kept selling out (there is still a very healthy appetite for CPC gear in Rugeley), and I have discovered Subs Club leaflets in every magazine except in issue 103. Have I been robbed?

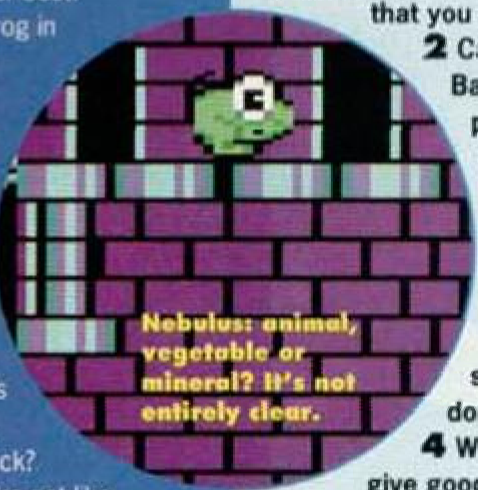
4 Thank you very much for explaining what PD is. I was going to write in and ask, but felt stupid.

5 In response to Richard Grant's theory about the design fault with the 64k upgrade and mouse interface (issue 103), he is correct, because exactly the same thing happens with mine.

6 And finally, could you please tell my cousin, Matthew Round, that an Amiga is a meek parsnip when compared to an Amstrad.

Thank you, keep up the good work.
Helena Peeling, Rugeley.

1 Aw, shucks, we do our best.
2 I still think there's a frog in the genes somewhere.
3 Unfortunately, the subs letters did have to come to an end, purely because none of the team had time to put one together every month. We thought it was better to concentrate our energies on the actual magazine.
4 Would we take the mick? Would we? You know we're not like that, thicko... er, I mean Helena.
5 I'll take your word for it.
6 Peas, cabbages, parsnips? Are you some kind of vegetable expert? What kind of munchable do you reckon the Amstrad is, then? **Dave**



Nebulus: animal, vegetable or mineral? It's not entirely clear.

Dear AA: Heavy turnover

I am writing on a number of points (*That must be painful – Dave*) about *Amstrad Action*. And so, without any further delay or time-consuming nonsense, I hereby with pride and a great sense of humour do thus tell you these reasons, and put forth a number of questions which I hope you will answer, so my life will be fulfiled in every sense of the word (*Get on with it – Dave*).

1 What happened to that game designer review, or even the game designer itself, that you previewed a while ago?

2 Can you print a list of the Basic commands that are present on the 6128 but not on the 464; otherwise how are 6128 owners supposed to know if their programs are compatible with the 464's?

3 Why do you hate Dizzy so much? What has he ever done to you?

4 Why do old *Amstrad Actions* give good reviews for games you say are rubbish?

5 I think adventure games are totally excellent – please put one on the covertape soon (and, while I'm asking, how about a football game too?).

6 Is it me, or is *Fluff* going to be available for snazzy Plus owners?

7 Why does no-one ever hold down a job on *AA* for more than six months?
Chris Hatton, Warrington.
PS Death to false metal.

1 *Zack* is one of those products that's been lost in the maelstrom known as Quantum. Hopefully, the company will sort itself out, because the program looked very promising.
2 We could, and we might, but the other way 6128 owners can find out whether their games are 464 compatible is to read the manual. Ah, yes, the manual. Perhaps we'd better print the list, Simon!
3 Because all the adventures were the same game with slightly different puzzles (one would've been okay, but the yolk was spread very thin); and all the others were just awful.
4 Because we're right and they were wrong.
5 Anything's possible.
6 No, it's not you. But to balance things up, *Megablasters* looks as if it's going to be 464 and 6128 only.
7 Hang on, I've been here 10 months, Simon's been here a year-and-a-half and Ollie, though he only returned last issue, was on the mag for three years before. Okay, my predecessors were a bit short-lived, but they just couldn't handle the pace. **Dave**

DES compo winners

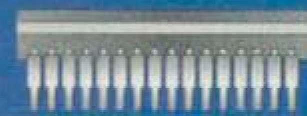
COMPO WINNER

Campursoft are pretty chuffed by the way *DES*, their WIMP (Windows, Icons, Menus and Pointer) desk-top file management system is selling. It has already proven a great success; and the company are planning to make all future software they release *DES* compatible. But two lucky people won't have to splash out on this revolutionary slice of software, because they are the winners of our DES compo from AA102.

And just to keep the suspense going, before we reveal the names of the winners, here are the answers you needed to be in with a shout:
1 b) Desmond Dekker
2 c) The Palace of Industry and Technology
3 c) Egg Fu Yung

I bet you're trying to remember how all those connected up with DES now aren't you? (So are we – Dave.) Anyway, the lucky winners are:
- James Broomfield, Winchester
- TB Miller, Lowestoft

Congratulations, your ROMs are on the way.



Dear AA

People power

Do you reckon that everyone who reads *AA* (and presumably they would all like to see more commercial releases) went into WH Smith's on a certain day (say June 4th) and ordered a CPC game, WH Smith's might get the message that there are still thousands of CPC fans out here who want to be able to buy new software?

Just a thought.
James Perry, Frinton-On-Sea

I think it's the software publishers themselves that you really need to convince here. But you never know, it's worth a try – if WH Smith's suddenly start ordering thousands of CPC games from the software publishers, some of the men in suits are bound to see the results showing up on their balance sheets. **Dave**



Dear AA

Bugged!

1 I have found problems with the following tape games:
- *Fighter Bomber* (Activision): The first targets are blown up, but they aren't registered as destroyed (so I cannot complete the mission).
- *Line of Fire* (US Gold): Is it just me, or is the level three boss (loads of blokes in a tower) impossible?
- *Viz* (Virgin): Press fire to activate special moves and your character locks up until he hits something and loses a life.
- *Monty Python* (Virgin): At the end of the first level, your score adds up and then the screen (and the game) locks up. Two copies did this.

2 Don't bother getting *Nigel Mansell's World Championship* on cassette! Why? It's a horrendously cut-down version with no fancy presentation, simpler graphics (Spectrum-like) and it's so jerky that you hit things before you even know you're close to them!
3 Do you know if *Super Cauldron* and *Prehistorik 2* will ever be re-released at budget prices?

Long live the Amstrad.
Mark Leatham, Umberleigh. (Where? – Ed.)





No wonder Gumby looks grumpy – there are bugs in Viz and Monty Python.

1 I reckon there's a feature in this. If you've found a dreadful bug in a game (and yes, we know about the *Blues Brothers* one), tell us about it and we'll compile a list that should embarrass a few programmers.
2 Thanks for the warning.
3 As far as we know, there are no plans at the moment, but it would be a shame if they weren't (because then we wouldn't get the chance to re-review them). **Dave**

Dear AA

Public outcry

Re your software piracy feature in AA103; I think it is ridiculous that we aren't allowed to copy games that are patently not commercially available anymore. Take *Prince of Persia*, for example. I really want it. You keep recommending it and I agree, it's a game I want in my collection. But I've searched everywhere for it, and have come to the conclusion that it simply cannot be bought from any shop, anywhere, any more.

So I have two choices – I either copy it or buy it second-hand (from your reader ads service, as I know you're going to mention it at this point in my letter) (*Would I? – Dave*). But either way, the publisher and author won't receive any royalties. So what's the difference? I think the whole situation is just stupid, and see no moral reason why I shouldn't just copy the game.
Mr Pseudonym, Somewhere.

The situation might seem a bit illogical, but the problem is that copying of the sort you mention is merely the thin end of the wedge. We can't have degrees of piracy; it must be completely illegal, with no exceptions, otherwise major league pirates will be able to find loopholes in the law which they could turn to their advantage, and that would be totally unacceptable. So, it's the small ads for you I'm afraid. **Dave**

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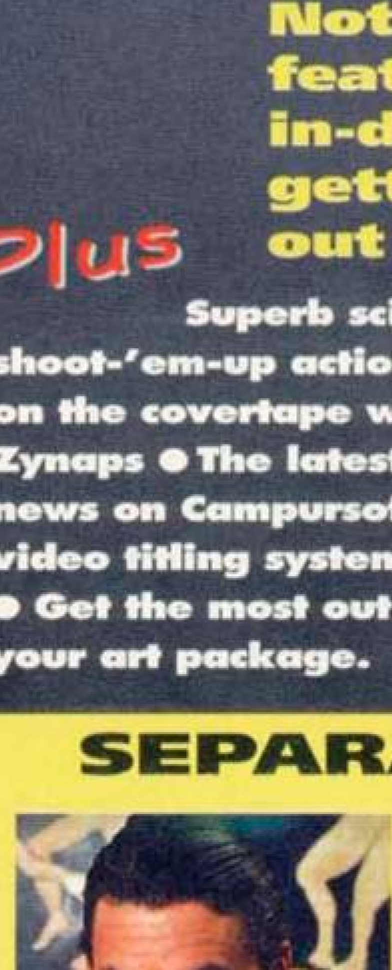
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Thursday 16th June 1994

SEPARATED AT BIRTH?



A Lemming



Jools Holland

Uncanny, huh? In fact the only way you can tell them apart is that when they stand next to each other the lemming is slightly taller.

Do you know of anyone who looks like a famous games character? Send your suggestions to: Separated at Birth, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

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